BOROUGH OF TORQUAY.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR, 1913

BY

THOMAS DUNLOP, M.B., C.M., D.P.H.

TOGETHER WITH THE

Annual Reports of the Sanitary Inspectors

AND

Meteorological Observer.

BOROUGH OF TORQUAY, 1913.

Area of the Borough, 3,906 acres.

Rateable value, £201,050.

Population—Census (1901), 33,625;
„ (1911), 38,772.
Estimated (1913), 39,250.

Number of separate occupiers—Census (1911), 8,459.

Density of population, 10 persons per acre.

Corrected death rate, 1913, 13·2 per 1,000. Average for previous five years, 13·26 per 1,000.

Birth rate, 13·6 per 1,000. Average for previous five years 14·3 per 1,000.

Infantile mortality, 1913, 108. Average for previous five years, 105.

Death rate from zymotic diseases, ·71 per 1,000.

Mean annual temperature, 52·8.

Hours of bright sunshine recorded, 1526·1.

Total rainfall, 33·17 inches.

BOROUGH OF TORQUAY.

ANNUAL REPORT

OF THE

Medical Officer of Health

For 1913.

To His Worship the Mayor, and to the Aldermen and Councillors of the Borough of Torquay.

GENTLEMEN,

I beg to present my Eleventh Annual Report on the health of the inhabitants, and the sanitary circumstances of the Borough of Torquay. The report also contains details of the administration of the Factory and Workshops Act as required by the Secretary of State for the Home Department.

The Medical Inspection of school children has been carried out according to the instructions of the Board of Education. This is dealt with in a separate report.

The corrected death-rate was equal to 13·2 per 1,000 of the population, being 1 per 1,000 higher than last year, which was, however, an exceptional rate. The infantile mortality was 108 per 1,000 births, slightly higher than in 1912, for the most part

due to lower number of births. The birth rate was 13·6 per 1,000 against 14·5 last year; while the zymotic death-rate was ·71 per 1,000; in 1912 it was ·35.

These rates compare favourably with those for the country as a whole. I desire to draw your attention to the matter dealing with Enteric Fever and Diphtheria. In the former we have a very interesting account of the discovery of a "Carrier," *i.e.* a person who although not suffering from Enteric is yet infectious and likely to spread the disease. Also the difficulty of preventing enteric through cockle infection, of which we had several examples last year. As regards the outbreak of diphtheria, instances are given of patients who have had the disease remaining for long periods in an infectious condition, necessitating keeping them closely under observation.

I have to thank the members of the Sanitary Committee and of the Town Council for their kindness and support throughout the year, also the Chief Officers of the Borough and Inspectors for their ever-ready assistance.

I am, Gentlemen,

Your obedient Servant,

THOMAS DUNLOP.

THE BOROUGH.

The Borough of Torquay is formed by the civil parishes of St. Mary-Church and Tormoham. The total area of the Borough is 3906 acres. It is divided into nine Wards, as follows :—

Torre	Ellacombe	St. Mary-Church
Waldon	Strand	Babbacombe
Upton	Torwood	Chelston

The populations of the various Wards at the last census are not yet available.

For the purpose of Sanitary administration, the Borough is divided into three districts, in each of which a Sanitary Inspector has full charge, under the Medical Officer of Health.

No. 1. District.—The whole of the Chelston, Torre, and Waldon Wards, that portion of the Strand Ward on the west side of Fleet Street, and that portion of Upton Ward on the west side of Union Street; under the supervision of Mr. MacMahon.

No. 2. District.—The whole of the Torwood Ward, that portion of the Strand Ward on the east side of Fleet Street, the whole of Ellacombe Ward, and that portion of the Upton Ward on the east side of Union Street; under the supervision of Mr. Watson, who is also Port Sanitary Inspector.

No. 3. District.—The whole of the St. Mary-Church and Babbacombe Wards; under the supervision of Mr. Body, who is also Meat Inspector for the Borough.

The principal public Institutions, from a Sanitary point of view, are :—

The Torbay Hospital in the Upton Ward.

The Western Hospital for Consumptives, and the Rosehill Children's Hospital, in the Strand Ward.

Smyrna, or the Mildmay Consumptive Home, in the Ellacombe Ward.

St. Barnabas', St. Luke's, St. Raphael's, and Erith House, all Consumptive Homes, situated in the Torwood Ward.

The Borough Isolation Hospital, is situated on the Newton Abbot Road, just outside the Borough boundary, in the Newton Abbot Rural District. The Corporation possess another Isolation Hospital, also situated outside the boundary, about half-a-mile from the village of Cockington.

Physical Features and General Character of the District.

The Borough of Torquay is situated on a promontory, being practically surrounded by the sea on three sides. This promontory is formed by hilly ridges, running N.E. and S.W. The principal heights—the Warberry Hill, 448 feet, and the Lincombe Hill, 372 feet—are composed of the Lower Devonian grits and slates. The lesser heights, such as the Braddons, Waldon Hill, and Chapel Hill, are formed of Middle Devonian Limestone, which rests above the grits and slates mentioned.

On each side of this central area, viz., at St. Mary-Church and Chelston, rocks higher in the Geological scale for the most part prevail. These rocks belong to the Permian formation, and consist of beds of Breccia—a kind of conglomerate—and sand stone of a deep red colour, owing to the presence of peroxide of iron.

There is very little clay in any portion of the area, and what does occur, is of the nature of marl, and is confined to the lower levels of certain valleys or depressions, so that rain is not detained on the surface, as it rapidly disappears through these rather pervious rocks and soils.

It is on the sides of these hills or ridges that most of the houses are built, the main roads and streets following the lines of the valleys. Thus the largest portion of the district is afforded protection from the cold winds of the North and East, a fact that is strikingly proved by the luxuriant growth of semi-tropical shrubs and plants in both public and private gardens.

METEOROLOGY.

Full details of the Meteorology of the Borough will be seen in the appended Annual Report of Mr. F. March, F.R. Met. Soc., M.P.S., Borough Meteorologist ; but the following resumé of the climatic conditions may be of interest :—

	1909.	1910.	1911.	1912.	1913.
Highest Maximum Temperature	81·9	75·1	83·4	82·3	79·0
Lowest Minimum ,,	24·9	23·7	28·4	21·6	30·3
Mean Maximum ,,	56·4	57·0	38·8	57·5	58·1
Mean Minimum ,,	44·7	45·9	47·0	46·8	47·4
Mean of Maximum and Minimum	50·6	51·5	52·9	52·2	52·8
Difference from Average ...	—·6	+0·3	+1·7	+1·0	1·5
No. of days on which rain fell	169	216	161	191	176
Total fall in inches	33·78	38·70	29·57	37·53	33·17
No. of hours of bright sunshine	1935·7	1771·0	2095·0	1445·9	1526·1

THE CLIMATE OF TORQUAY.

The winter climate may be be described as mild and equable, due in a large measure to the town being built on a promontory, with the sea practically on two sides and hilly ridges affording protection from the cold winds of the north and east. A most important feature is the large amount of sunshine experienced during the winter months. Other beneficial factors are freeness from land fogs and dryness of the air.

The benefit of living under such climatic conditions must be apparent to all, but it is inestimable to those who are asthmatical, or who are sufferers from chronic bronchitis. To the aged and infirm, who are extremely sensitive to every change of temperature, life under such conditions is prolonged and made worth living. The bright sunshine and the possibility of being constantly in the open air, is most advantageous to children, and those who are delicate have every chance of growing up strong and healthy.

The Summer Climate. Year by year the town becomes more popular as a holiday resort. It is unquestionable, that during the hottest days, the maximum temperature here is five to ten degrees lower than that recorded in London and the Midlands. This stands to reason, if one considers the position of Torquay, flanked by the sea, and with Dartmoor in the rear, it is constantly fanned by cool breezes, from one or other directions. It seems difficult

to imagine a more delightful spot to spend a holiday in. Boating, bathing and fishing are of the best, while in the neighbourhood are innumerable places of beauty and interest, which are easily accessible by sea, coach, or rail. These facts are amply proved by the constantly increasing number of visitors who, year after year, spend their summer holidays here.

WATER SUPPLY.

The water supply of Torquay is derived from an upland surface gathering ground about fifteen miles from Torquay, on the borders of Dartmoor. The area of the gathering ground is about 2,241 acres, and is composed of :—

	Acres.
Moorland	572
Woods	75
Woods (new)	42
Land within zone	350
Land under cultivation	212
Grazing	990
Total ..	2,241

The water is stored in three large reservoirs—the Tottiford, 103,000,000 galls. ; the Kennick, 194,000,000 ; and the Trenchford, 171,000,000.

As stated in previous reports, the Corporation are owners of the whole watershed, and now there are no farms or inhabited buildings on the area, so that there can be no danger from what would otherwise be a constant menace to the purity of the water.

Practically the whole of the watershed, the springs, streams, and feeders, are protected by zone fences. The system of deep trenching boggy land adjacent to the streams, is still being proceeded with. This is having a beneficial effect on the physical character of the water. The aerator for the water of the Kennick reservoir has worked satisfactorily.

Although the water supply is protected from pollution in every possible way, the Town Council, in 1910, after very careful consideration, and on the advice of the Water Engineer and myself, decided to instal a system of pressure filters to clarify and remove all suspended matter from the water. The works were completed early in the autumn of 1912, and are now working very satisfactorily.

The introduction of these filters has had the effect of clarifying the water, by removing all suspended matter, which may have detracted from its appearance in the past.

The Council have thus spared no trouble or expense to obtain pure water, to protect it in every possible way at its source ; by filtering and storing in covered service reservoirs, to supply the consumers with water, the purity of which is beyond reproach.

The rainfall for the past five years at the watershed, has been as follows :—

	1909.	1910.	1911.	1912.	1913.
Kennick ...	41·24	54·44	43·01	47·45	48·52
Mardon ...	41·91	56·93	45·62	49·81	44·49
Blackingstone ...	42·82	59·26	46·26	52·25	47·50
Laployd ...	41·58	59·02	49·14	53·10	48·66
Bullaton ...	42·17	57·16	46·91	50·91	48·12

The average of these gauges for the year is 46·25 inches compared with 50·70 inches in 1912.

The evaporation has measured 17·72 inches against 16·39 inches last year.

The average daily consumption for all purposes has been 1,816,000 or 33·44 gallons per head for a population of 54,300 persons.

This population includes not only that of Torquay, but that of Newton Abbot and several small villages supplied by the Corporation.

In the height of the summer difficulty has been experienced, owing to the amount of water consumed, in keeping the service reservoirs fully charged. During recent years the number of houses in the district has largely increased, and the mains, which at ordinary times are of sufficient capacity, are unable to cope with the increased demand. Mr. Chapman, the Water Engineer, has advised the Council to lay a new main. The principle has been approved and application has been made to the Local Government Board to sanction a loan for laying the first portion of this new main.

Quality of the Water.

Professor Percy Franklin, after visiting the gathering ground and examining samples of the water, both chemically and bacteriologically, reported as follows :—

A source of water supply which, in respect of freedom from suspicion, ranks with the best upland surface supplies in the Kingdom. The water also contains such a small amount of lime and magnesia salts that it possesses all the well-known advantages of very soft water, whilst its slightly alkaline reaction prevents it from having any solvent power on lead."

The result of analysis shows that the quality of the water keeps at a high standard of purity. The following results of a recent analysis are typical :—

Physical Characters.

Colour ...	...	Slightly brownish yellow
Turbidity	...	Clear
Odour ...	...	None
Deposit ...	...	Nil

Chemical Results.

Expressed in parts per 100,000.

Total solids	6·40
Chloride of Sodium	1·6
Hardness	2·3
Nitrites	nil
Nitrates	·13
Free Ammonia	·000
Organic Ammonia	·016
Oxygen absorbed in 4 hours at 80° F. ...	·134
Poisonous metals	nil

From an examination of the above results and a knowledge of the gathering ground, I have no hesitation in classifying this water as an excellent one for all domestic purposes.

SEWERAGE.

The sewage of the whole district, and most of the storm-water, is conveyed to the main sewer in Fleet Street. That of the low-level system, which comprises the area covered by the Strand, Torbay Road, Vaughan Parade, Victoria Parade, Beacon Hill, George Street, and Swan Street, being pumped into the main sewer, by means of electric pumps. The main sewer is seven feet in diameter, and runs from Fleet street to Hope's Nose,

a distance of almost two miles. The outfall is at such a level that the sewerage is discharged at all states of the tide. No method of treatment is adopted, as the flow of current is out towards mid-channel beyond Berry Head, and does not under any circumstances return towards the bay.

Closet Accommodation.

With a very few exceptions the whole of the houses in Torquay have water closets with water waste preventor cisterns. The closets are in almost all cases drained to the sewers, the exceptions being practically where the houses are at such levels as to necessitate the provision of cesspools. In one or two outlying situations where there are no sewers a few cottages have earth closets.

Sanitary Conveniences.

Owing to the increasing number of summer visitors the Council have devoted much attention to the provision of sanitary conveniences. A new shelter with conveniences for males and females has been erected at Corbyn's Head. At Vaughan Parade, adjacent to the Pavilion, rooms have been adapted and lavatories erected for males and females. A new convenience for males has been erected in Upton Valley and the old convenience in Swan Street practically re-constructed.

Collection and Disposal of House Refuse.

As stated in my last report the Council now possess Bye-laws dealing with the storage of house refuse in sanitary galvanised iron ash bins.

These Bye-laws are applicable to both old and new buildings. No attempt has been made to enforce a wholesale substitution of these receptacles, but as occasion arises the owners are called upon to provide them, such as after inspections made under the Housing and Town Planning Act, and where nuisances are detected.

House refuse is removed by the employees of the Corporation under the Surveyor's Department. In most parts of the town it is removed once a week, but in certain parts twice. It is carted to the destructor works in Upton Valley, and there consumed, 11,462 tons being dealt with annually, at a cost of £2,878. The destructor is a "Warner Perfectus" of four cells. The boilers are heated from the furnaces, and the steam generated can be used

to drive donkey-engine, vertical engine for running blower, 25-horse-power engine for running mortar mill and electrical installation. The clinker produced is ground and used for mortar; for this there is a good demand.

In the past when repairs had to be made and when preparing for the yearly inspection by the Insurance Company, it has been necessary to let out the furnaces. This necessitates the tipping of the house refuse away, which is dangerous and highly objectionable, especially during the summer months. Taking this into consideration and also the fact that owing to the increase in the number of new houses there is an increased amount of refuse, the Council, in order to obviate these difficulties, have decided to erect two new cells at the destructor and have made application to Local Government Board for sanction to borrow the money.

Schools.

Matters pertaining to the Elementary Schools and their sanitary condition are dealt with in the Report to the Education Authority. Monthly inspections are made by each of the Sanitary Inspectors as to the condition of the lavatories of the schools in their respective districts. Mention will also be made concerning school influence when discussing the incidence of infectious diseases.

POPULATION

and Social Condition of Torquay.

Torquay is essentially a residential town and health resort, consequently a large proportion of its inhabitants are villa residents, while the remaining portion may be said to obtain a livelihood by catering for them. There are numerous large hotels, and many up-to-date boarding houses for the accommodation of visitors. There are no manufactories in the district.

During the summer and early autumn there is a very large influx of visitors, who are catered for by the inhabitants of the smaller houses. There must in many cases be gross overcrowding, but of this it is very difficult to obtain information. However, as these visitors spend almost all their time out of doors, there is not much danger to health from this temporary overcrowding.

Since the taking of the Census in 1911, and the issue of the Preliminary Report in June of that year, no further data has

been published, so that we cannot yet give particulars of the Ward population, etc.

As I stated in my last report I considered that there must be some fallacy in the number of inhabitants returned at the last census. I have therefore made my estimate of the population in 1913 considerably less than if estimated on the Registrar General's figures. For this year (1913) I give the estimated population at 39,250, and have used this figure in calculating the various rates.

It is necessary in preparing statistics and comparing the various death rates of Torquay with those of the whole country, to consider the age and sex distribution of the population. The population of a district, in which the proportion of males to females, or of young persons to old persons, are different from those of the country generally, will suffer more than the whole country from the diseases which particularly affect persons of the age and sex which predominate in the district. In order to ensure a just comparison between the death-rate of such a district and the country as a whole, is is necessary to raise or lower the gross death-rate of the district to what they would be if the proportions of the local population in respect of age and sex were the same as those in the country generally.

At the 1901 Census, Torquay was found to have a much larger proportion of females than males in its population, and of persons of advanced ages, than that of England and Wales. I then calculated a factor by which our rates had to be multiplied to make them comparable with those of the whole Country. This factor was ·8044. The figures for the 1911 Census are not yet available, but I believe there will be little alteration found in these proportions.

BIRTHS.

The total births registered during the year was 535—males, 281 ; females, 254 ; being 34 less than in 1913. Of the 535 births, 27 were illegitimate.

The numbers registered in each quarter of the year were :—

	Boys.	Girls.	Illegitimate.
First Quarter ..	57	54	6
Second Quarter ..	84	73	11
Third Quarter ..	67	66	4
Fourth Quarter ..	73	61	6
Total ..	281	254	27

The Ward distribution is as follows :—

	Boys.	Girls.	Illegitimate.
Torre	27	15	2
Waldon	16	17	4
Upton	34	53	3
Ellacombe ..	68	59	7
Strand	45	24	5
Torwood	10	11	3
St. Mary-Church ..	31	32	2
Babbacombe ..	37	31	1
Chelston	13	12	0
Totals	281	254	27

The following table gives the total births and birth-rate for the past ten years compared with those for England and Wales.

Years.	Number of Births.	Torquay Birth Rate, per 1,000 living.	England & Wales Birth Rate, per 1,000 living.
1904	530	15·0	27·9
1905	522	14·6	27·2
1906	566	15·6	27·0
1907	537	14·6	26·3
1908	524	14·0	26·5
1909	575	15·2	25·6
1910	539	14·1	24·8
1911	536	13·8	24·4
1912	569	14·5	23·8
1913	535	13·6	23·9

The birth-rate therefore shows a decline of practically 1 per 1,000 of the population.

In comparing the birth-rate of Torquay with other towns, we must bear in mind the constitution of the population. Here we have a large excess of females over males, a large proportion of the females are spinsters, and some 40% are either above or

below the child-bearing age. In the face of such facts, it is unreasonable to expect anything but a low birth-rate.

VACCINATION.

Through the courtesy of Mr. Edwards, the Vaccination Officer, I am able to give the results of primary vaccination for the years from 1898 to 1912.

Year.	Total births registered	Successfully vaccinated	Insusceptible of Vaccination	Had Small-pox	Number of Certificates from Conscientious Objectors	Died Unvaccinated	Postponed by Medical Certificate	Removed to other districts the Vaccination Officer of which has been apprised	Removed Address unknown	Percentage successfully Vaccinated	Excluding those who died Unvaccinated. Percentage
										%	%
1898	664	544	2	—	10	64	6	7	25	82	90
1899	612	505	6	—	14	67	6	3	11	83	93
1900	596	502	1	—	15	47	7	3	21	84	91
1901	597	491	2	—	16	57	13	1	17	82	91
1902	579	488	2	—	8	61	4	4	8	84	92
1903	565	508	2	—	14	34	1	3	3	90	95
1904	564	476	—	—	20	49	3	6	8	84	92
1905	561	504	—	—	16	30	5	2	4	90	94
1906	591	501	1	—	25	47	5	2	8	84	92
1907	582	447	2	—	41	39	5	4	13	76	82
1908	546	394	—	—	83	48	8	4	9	72	80
1909	596	370	3	—	158	37	12	1	11	62	66
1910	568	302	2	—	197	43	12	2	8	53	57
1911	560	269	1	—	231	37	9	4	9	48	54
1912	583	270	3	—	239	48	3	4	15	46	54

NOTE.—These are the figures for the Torquay Registration Sub District.

I must once again draw attention to the yearly increase of the population unprotected from small-pox, which means that should this dread disease gain access among us, a severe and costly epidemic will result.

INFECTIOUS DISEASES.

Under the Torquay Harbour and District Act, 1886, provision was made for the compulsory notification of the dangerous infectious diseases. It also contained similar clauses to those in the Infectious Diseases Prevention Act, 1890, which rendered its adoption unnecessary.

Notifications.

During the year, 189 cases of infectious diseases were notified.

The following table shows the number of cases of the various diseases compared with those notified during the past five years :—

Notifiable Disease.	1913.	1912	1911.	1910.	1909.
Small-pox	—	—	—	—	—
Cholera	—	—	—	—	—
Diphtheria includ'g Membranous croup	107	28	62	58	61
Erysipelas	5	4	3	6	5
Scarlet fever ..	56	22	34	58	73
Typhus fever ..	—	—	—	—	—
Enteric fever ..	21	9	2	1	4
Relapsing fever ..	—	—	—	—	—
Continued fever ..	—	—	—	—	—
Puerperal fever ..	—	—	—	—	—
Plague	—	—	—	—	—
Ac'te Poliomyelitis	—	1	1	—	—
Totals ..	189	64	102	123	143

Phthisis and Tuberculosis.

Notification of Phthisis under the Local Government Board's Order, Public Health (Tuberculosis) Regulations, 1912.

Form A. Primary Notifications by Medical Practitioners, Medical Officers of Hospitals, Poor Law Institutions, District Medical Officers, Medical Officers of Sanatoria, etc. 125

Form B. School Medical Officer	3
Form C. Supplemental Notifications, Admission to Sanatoria and Poor Law Institutions ...	11
Form D. Ditto. Discharge	8
	147

Thirteen cases have been notified twice, and five three times. Of 125 cases notified under Form A, 27 were visitors who had come here on account of the disease.

The following table gives the number of notifications from each disease, together with the average meteorological conditions prevailing during each month of 1913.

Meteorological Data and Prevalence of Infectious Diseases during the Year 1913.

Month.	Meteorological Data.					Infectious Diseases Notified.					
	Mean Temperature.	Mean Daily Range.	Relative Humidity.	No. of Rainy Days.	Rainfall. Inches.	Small-pox.	Diphtheria and Croup.	Enteric Fevers.	Scarlet Fever.	Erysipelas.	Total.
January ..	45·0	9·8	88	27	7·22	—	—	2	6	2	10
February ..	44·1	8·9	83	8	1·44	—	4	—	9	—	13
March ..	46·3	10·5	88	19	3·74	—	2	1	4	—	7
April ..	48·5	9·6	82	19	4·05	—	6	—	9	—	15
May ..	54·8	12·8	80	15	2·59	—	4	6	4	1	15
June ..	58·0	13·3	74	12	0·51	—	3	2	3	—	8
July ..	61·5	12·6	71	6	0·30	—	7	1	3	—	11
August ..	63·3	12·9	73	8	1·53	—	19	—	6	—	25
September ..	59·9	10·1	83	13	2·50	—	31	4	4	1	40
October ..	56·2	9·7	86	20	3·68	—	13	2	2	1	18
November ..	50·6	11·4	86	20	3·54	—	5	2	4	—	11
December ..	45·3	7·5	83	9	2·07	—	13	1	2	—	16
Totals and Averages	52·79	10·76	81·42	176	33·17	—	107	21	56	5	189

In Table II. of the Local Government Board returns, on page 53, full details are given of the age of patients, the number occurring in each ward, and the number of such removed to Hospital.

Cases Isolated in Hospital.

Of the 189 cases notified, 149 were removed for treatment in Hospitals; this is practically 78% and is very satisfactory. They were as follows:—

Diphtheria,	89	out of	107	cases removed,	83%
Scarlet Fever,	47	,,	56	,, ,,	84%
Enteric Fever,	13	,,	21	,, ,,	62% (to Torbay Hospital).

Steps taken to Prevent the Spread of Infectious Disease.

On the receipt of a notification, the house is visited as soon as possible, particulars as to source of infection, milk supply, school attended, drainage, etc., obtained, and, if necessary, arrangements made for the removal of the patient to the Sanatorium. Frequently the Medical Attendant notifies that the case is one suitable for treatment in the Sanatorium, a step which greatly facilitates their early removal.

After removal, or on recovery, should the patient be isolated at home, the infected rooms and bedding is fumigated with formalin. Next day the bedding and clothing is removed to the Disinfecting Station and there sterilised in a steam disinfector. In every case of notifiable disease this is done free.

The disinfector is one of the Thresh Disinfector Company's machines. It has now been in constant use for nine years, without requiring any special attention. During the year, 2,544 articles were disinfected, consisting of 246 mattresses, 429 pillows, 298 blankets, 65 bolsters, 120 sheets, 92 quilts, and 1,294 other articles of clothing, etc.

Where it is found that children in an infected house are attending one of the public elementary schools, the Attendance Officer is notified of the case. All cases suspected to be infectious

by the School Attendance Officer, and where no doctor is in attendance, are notified to me as Medical Officer to the Education Authority.

The systematic notification of all cases of infectious or suspected illness among the children attending the elementary schools, by the Head Teachers has, on the whole, proved of much assistance to me as Medical Officer of Health. On one occasion, through neglect to notify suspicious absentees, children were allowed to return to school after a short absence and we were able to prove that they had, on their return, infected a number of other children with Diphtheria. This would have been prevented if the cases had been notified and examined when first away from school.

Means of Isolation.

The Borough Sanatorium, Newton Abbot Road, consists of the Administrative Building—Scarlet Fever ward block, consisting of two wards, with seven beds in each; and a Diphtheria ward block, two wards with seven beds in each. There is also a private ward for one patient, with Nurse's room attached.

Enteric Fever.

When there is accommodation, the Authorities of the Torbay Hospital admit cases of this disease.

Cockington Sanatorium.

Taken over from the Cockington Urban District at the time of the amalgamation. This hospital is considerably more than half-a-mile from any inhabited building, so that it is kept in readiness for the reception of small-pox, should any arise. Twice during recent years has it proved its usefulness, as I have, by removing to it imported cases of small pox without delay, prevented the spread of the disease. In a health resort such as Torquay, where the introduction of small-pox is not unlikely, and the consequence of an epidemic would be disastrous, such accommodation is absolutely indispensable.

Small-Pox.

No cases of this disease were notified.

Enteric Fever.

Twenty-one cases were notified, of which two terminated fatally.

On July 25th, 26th, 27th, and 28th, 1912, four cases of Enteric were notified, all receiving milk from the one dairy—the first being the wife of the milk dealer. As all the cases occurred practically simultaneously it was presumed that they were all infected from the same source and probably with infected milk.

The dairy obtained its supply from two sources :—

1. A
2. B

} Dairy farms outside the Borough.

The farms were visited by Dr. Mapleton, Medical Officer of Health for Newton Rural District, and me.

The occupiers were closely questioned as to any recent illness amongst their families or employees, but with negative results, and there was nothing at the farms indicative of pollution of cans, etc.

As A's supplied another dairy in the Borough and there had been no cases amongst their customers and it is stated that the milk from B's is taken direct from the country cart to the van and delivered without being first taken to the dairy, it seems reasonable to exclude A's supply and look on B's as the possible factor.

At my request, Dr. Mapleton had samples of water taken from the two farms and analysed. The result showed no signs of the water being polluted.

The wife of the dairyman, Mrs. K., was in the Torbay Hospital about four weeks and on her discharge went into the country for a month. Then she returned and resumed her usual occupation. This would be towards the end of September, 1912.

On January 21st, 1913—four months later—Mrs. K's brother, who was employed at the Dairy to deliver milk, was notified as having Enteric and was removed the same day to the Torbay Hespital. This case terminated fatally about the end of February. He first consulted a doctor on January 16th.

I had a long talk with Mrs. K. who stated that she never felt better in her life. I explained the possibility of her being a typhoid carrier and advised the utmost precautions as to cleanliness and the use of disinfectants.

On March 6th—44 days later—a young lady living in a villa was notified as having Enteric. Onset of illness, February 26th. No assignable cause except that milk was obtained from K's dairy. On making enquiries I went to the dairy and suggested the advisability of sending samples of urine from Mrs. K. for bacteriological examination. A sample was taken and forwarded to Clinical Research, who replied that they were unable to detect the B. Typhosus. I subsequently wrote Dr. Mapleton informing him of the whole facts of the new case and asking him if he would make further enquiries at B's farm, and if he considered it worth while to take specimens for bacteriological examination. He did so, but found that the men employed in milking had left and been replaced by others. He also stated that the milk never enters the farm premises. Under these circumstances we did not see any use in taking specimens from them for bacteriological examination.

On May 6th, 1913, 53 days since the previous case, a notification was received of a lad, A. H., living in the neighbourhood of K's dairy. He was removed to the Torbay Hospital and a Widal test made which proved positive. The patient was first out of sorts April 20th. In this case milk was obtained from three sources, but amongst them was K's dairy.

On May 16th, three cases were notified in the same area. In the first, as far as the mother was aware, no milk was received from the suspected dairy, but I understand that scald milk is hawked in this neighbourhood from that dairy. The other two cases received their milk from different sources, but occasionally had milk from K's dairy.

Besides these definite cases I had investigated four other suspicious cases; two were proved bacteriologically to be not Enteric. Of the remaining two, one, an adult woman, was attended by a doctor who did not think it Enteric, and the other, notified May 24th, was in the same house, where the case occurred on May 6th. Here the symptoms were far from typical.

On May 26th, another case was notified. The patient was a lad, who, out of school hours, hawks scald milk from the suspected dairy. He only complained first on the 22nd, and his symptoms were very indefinite.

After the occurrence of the case on May 21st, I at once saw the dairyman and informed him that I should have to have further samples of urine and excreta from his wife examined bacteriologically. These samples were taken and forwarded to the Clinical Research Association and I received the following report. The urine was free from the presence of the Typhoid Bacillus, but in the sample of excreta they state "a bacteriological examination of this specimen demonstrates the presence of fair numbers of organisms, which agree in their Morphological cultural character with the Baccillus Typhosus. An animal typhoid serum completely agglutinates this organism up to 1 in 10,000." This practically means that the woman is an undoubted "carrier," and one can only come to the conclusion that her work in the dairy is responsible for the cases we have had.

I immediately saw the dairyman and informed him that until I had reported the facts to the Sanitary Committee, his wife must cease in any way to attend to the milk. This he willingly promised should be done.

The Sanitary Committee fully considered the question and decided that Mrs. K., the dairyman's wife, must cease to work in any way with milk or foods. A Sub-Committee was appointed to interview the dairyman. After negotiations with him he decided to dispose of the business. This was effected soon after and since then no suspicious cases have been reported from this area.

In no less than six cases was there a distinct history of the consumption of cockles at Coombe Sellars, on the banks of the River Teign, within the incubation period of enteric fever. The first two patients were sisters residing in different parts of the Borough. On Thursday, August 14th, they went with a party of four others to this favourite resort and had a cockle tea. The next day four out of the six were attacked with sickness and diarrhoea for several days. The two patients partially recovered but became ill again, and on September 5th they were diagnosed to be suffering from enteric, being then well on in the first week of the disease.

In the next case a visit was paid to the same resort on August 15th, and when seen by doctor on September 12th was considered to be in the second week of disease.

In the fourth case the visit was made on August 31st, and patient first complained on September 17th and was removed to Hospital on September 27th, with well-marked symptoms.

In the 5th case several visits had been paid and cockles eaten within a fortnight of the onset of symptoms. The symptoms were typical. In the last case a party of five visited Coombe Sellars on September 1st and had cockles, on their return all suffered more or less from sickness and diarrhoea. The patient was not very ill then, but a fortnight later was out of sorts and on September 23rd a Widal serum test gave a positive reaction.

It has been the custom in this Borough for many years to put up warning notices in the early summer, warning inhabitants and visitors of the danger of eating shellfish taken from the neighbouring tidal estuaries. Apparently this has little effect, as hardly a season passes in which we do not get a batch of enteric cases, which any reasonable investigator must attribute to the consumption of cockles. In July, at the Congress of the Royal Sanitary Institute, I read a paper with a view to raising a discussion as to how the consumption of polluted shellfish could be legally prevented. The result of the discussion practically showed the helplessness of Sanitary Authorities.

Two cases were imported, the patients coming here ill; one was a naval seaman.

Three others were secondary cases.

Puerperal Fever.

No cases of this disease were notified. The inspection of Midwives is carried out by the Officers of the County Council.

Diphtheria.

After a year which may be described as normal, when 28 cases of Diphtheria were notified in the months of August and September of last year the disease again assumed epidemic proportions and we had no less than 107 cases notified.

The following table shows the number of cases notified each month in the various wards :—

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Torre	—	—	—	—	—	—	2	3	—	—	—	—	5
Waldon	—	—	—	—	1	—	—	—	2	—	—	1	4
Upton	—	—	1	—	—	1	—	2	5	2	—	—	11
Ellacombe	—	3	1	4	1	—	3	2	5	2	1	1	23
Strand	—	—	1	—	2	2	—	—	2	2	3	—	12
Torwood	—	—	—	—	—	—	2	1	—	—	—	1	4
St. Mary-Church ..	—	—	—	—	—	—	—	9	17	7	1	7	41
Babbacombe ..	—	—	—	2	—	—	—	1	—	—	—	2	5
Chelston	—	—	—	—	—	—	—	1	—	—	—	1	2
Totals ..	—	3	3	6	4	3	7	19	31	13	5	13	107

From the above it will be seen that during the first seven months of the year there was no special incidence of the disease. About the middle of August there was a sharp outbreak in the St. Mary-Church Ward, and the occurrence of cases in six out of the other nine wards. The outbreak reached its maximum about the middle of September, during which month 31 cases were notified, 17 being in St. Mary-Church. In October 13 cases, November 5, and in December 13.

In October, 1913, I presented a special report dealing with the outbreak. I then stated that the first cases were notified in Hele, about August 20th, and from that date till August 31st, nine other cases occurred there. The histories of these cases showed direct contact among the patients and the possibility of some unrecognised cases, but owing to the schools being closed for the summer holidays, it was impossible to locate them. Many complaints were then received of smells and quantities of flies arising from the deposit of large amounts of foul house and trade refuse on some private land, known as Windmill Hill, where the Hele children play. This was found to be correct, and steps were at once taken to burn all destructible material and cover all decomposing substances with lime.

On September 1st, the public elementary schools were due to re-open, and as all the notified cases had been removed and contacts excluded, I took no steps to prevent their re-opening, as I believed I would be in a safer position to at once obtain knowledge of any suspicious cases. About 60 children from Hele attend St. Mary-Church Girls' and Boys' Schools, St. Mary-Church Priory Roman Catholic Schools, and Homelands Council Schools, and they returned to school with the others. From September 3rd to September 7th seven new cases were notified. I visited the schools and examined the throats of all Hele children and took swabs from all whose throats showed the slightest deviation from the normal. The bactereological report received showed that two contained the diphtheria bacilii and one other was considered suspicious. I consequently advised the closure of the St. Mary-Church Boys', Girls' and Infants' Schools, and the Priory School for three weeks, and excluded all Hele children from Homelands. The Sunday Schools were also closed. Cases continued to be notified throughout September, and caused considerable anxiety in the affected district, with the result that all cases of the slightest sore throat received medical attention. Gradually things quieted down, and those children who were removed in the early days were, after close bacteriological examination, discharged from Hospital. Several secondary cases occurred, and others that we suspected were infected from some of these discharged cases, but in no instance did bacteriological examination confirm this suspicion.

In November, a case was notified from Rose Hill Children's Hospital. The history of cases in this institution is of much interest. On March 1st, one case occurred and the patient was removed to the Isolation Hospital. The child had been at Rose Hill for over six months, came from Birmingham and had no friends in the town. How she became infected is a mystery. When she recovered she was sent to her home in Birmingham direct from the Isolation Hospital, so could not have infected anyone at Rose Hill. On July 21st, a second case occurred; this patient, together with another child, who about a month previous had complained of throat, but the bacteriological examination was then negatives, now on re-examination gave a positive result, were removed and disinfection carried out. On August 4th, a nurse at Rose Hill was infected and at once removed. One of these patients on discharge was sent to his own home at Weymouth. The other child and the nurse, after being pronounced free from infection, were sent away for three weeks and then

re-examined before admission to Rose Hill and again found clear. Things then remained quiescent until the case mentioned above occurred on November 1st, followed by another on November 5th. This naturally created uneasiness among the Hospital Authorities, and I met in consultation the Medical Staff, when all the circumstances were discussed. It was decided to advise that swabs be taken from all the patients and staff at the Hospital, and I suggested that all the patients should be prophylactically injected. The result of the examination for carrier cases showed that four of the inmates were carriers. The Committee of Management met and decided to request the Sanitary Authority to remove these carrier cases to the Isolation Hospital. Although this taxed our accommodation somewhat they were removed and disinfection carried out. Unfortunately, in spite of all precautions, another case was notified on November 22nd. I then advised that the Hospital should be cleared; all children who were found clear on bactereological examination, if possible, were sent to their homes; those who could not, were boarded out. Afterwards the wards, etc., were sprayed with formaldehyde, and ceilings, etc., whitewashed, etc. In future no cases will be admitted till they are bacteriologically shown to be clear. The instructive fact is the presence of several carrier cases in this small community. They were kept in hospital till reported clear bacteriologically, one child being detained for 14 weeks; she has since been boarded out for over three weeks, and I learn that again the growth from a swab shows suspicious bacilli. Two other similar cases have come under observation during the year. In September, a child in an orphanage was reported to be complaining of sore throat; I saw her and could detect no sign of membrane, but a swab taken was reported to be positive. She was removed and kept in the Isolation Hospital 38 days, swabs being taken at intervals till reported negatived. As a precaution the child was not taken back to the orphanage but boarded out. After three more weeks a swab was taken and reported positive. In spite of all kinds of antiseptic applications at the end of the year she was still infectious. In another case, a child who had the disease was treated at home, and after recovery and a period of convalescence, the mother sent him to school, but the teachers have instructions to admit no such cases without a certificate from me. I took a swab, which was reported positive. The child was again treated by his medical attendant, but at the end of several months was still considered bacteriologically infectious. I may say that in all cases for examination for freedom from infection, both the throat and nose are swabbed. The occurrence of carrier cases must be

much more frequent than is generally believed and must account for the recurrence of many cases of diphtheria.

My experience has been that the throat and nose clear up and are found free from infection much sooner, if the patient has had a severe attack, than when the case has been mild.

The treatment of "carrier" cases and convalescents who retain the specific organisms for long periods is one of great difficulty. I have tried almost all the well-known disinfectants, but what may prove efficacious in one case is of little use in another. I have discussed the subject with Mr. Quant, the Borough Bacteriologist, and he suggests the use of either autogenous or "mixed strain" stock vaccines; but one hesitates to be a pioneer in this form of treatment. I have not yet read of such treatment, but expect the same difficulty has been encountered in large isolation hospitals.

From the table giving the monthly notifications of Diphtheria cases it will be seen that there was an increased number of notifications in December. Those in St. Mary-Church were entirely due to the neglect of a head teacher to notify the absence of two children with suspicious symptoms. They were away for a week or ten days and returned, with the result that several fresh cases occurred in the following few days. Bacteriological examination of the throats of these two children showed they must have had a mild attack. Had they been seen when first ill these further cases would have been avoided.

Of the 107 cases notified, 89 were removed to the Isolation Hospital. This is highly satisfactory, but during September it threw such a strain on our accommodation that I had to disinfect and utilise the Scarlet Fever wards for the reception of convalescent diphtheria cases, while certain scarlet cases were isolated at home.

The age and sex distribution is as follows;—

Ages.	1—5	5—15	15—25	25—65	Totals.
Males	5	33	2	1	41
Females	6	53	3	4	66
Totals	11	86	5	5	107

There were nine deaths from diphtheria ; this gives a fatality rate of 8·4 per cent. In 1912, the last figures available, the death rate for England and Wales was 9·34 per cent. of the cases notified.

In all instances diphtheria contacts are kept under observation for 14 days, and all children discharged from Hospital cured are kept at home for a similar period, swabs being taken before they return to school.

Although antitoxine is provided free, its use as a prophylactic has not been made use of to the extent it might have been. In several instances second or third cases have occurred in infected houses a few days after the first notification. The medical practitioners have almost without exception used antitoxine treatment, and some inject it in all suspicious cases before their diagnosis is confirmed bacteriologically.

The Council have an arrangement with Mr. Quant, of the South Devon Chemical and Bacteriological Laboratory, to examine swabs free for medical men in the Borough, and this has been taken full advantage of.

The County Council have also made arrangements whereby the Medical Officer of Health can have swabs examined free.

During the year 597 specimens were examined.

Diphthera 476	67	were found positive.
	217	were found negative.
	192	were for freedom from infection.
Enteric 11	5	were positive.
Widal Test	6	were negative.

Phthisis, sputum examinations, 110.

Scarlet Fever.

Fifty-six cases of Scarlet Fever were notified against twenty-two in 1912. At no time and in no part of the Borough did the disease assume epidemic proportions. Cases occurred in practically all the wards. The disease for the most part was mild in character. One death was registered from this cause. The

patient developed uræmic convulsions and died a week later. A curious fact was that some time later a brother of this patient was admitted suffering from scarlet fever and he also suffered from albumenuria to a considerable extent. Owing to the mild form of scarlet fever at the present time, on several occasions I have, when investigating cases, visited the schools attended by the patients, and found one or more children attending whose hands and bodies showed typical desquamation. Other such cases have been detected by Dr. Ellis, the School Medical Inspector, during his examination of the children.

Of the 56 cases, 47, or 84 per cent., of those notified were removed to the Isolation Hospital.

The age and sex distribution is as follows :—

	At all ages.	1—5	5—15	15—25	25—65
Males	31	13	11	4	3
Females	25	5	14	1	5

ISOLATION HOSPITAL REPORT.

For the Year ending March 31st, 1913.

Gentlemen,

At the close of the financial year, 1912, there were six patients in the Hospital ; from that date till March 31st, 1913, 55 new cases were admitted, making a total of 61 patients treated during the year.

The numbers of the various diseases compared with those of the previous year are as follows :—

	1911-12.	1912-13.
Scarlet Fever	24	38
Diphtheria	33	20
Measles	—	2
German Measles	1	1
	58	61

These patients were under treatment a total of 2,193 days, or an average of 36 days each, against 1,811 days, or an average of 31·2 days in 1911-12. The average stay of Scarlet Fever cases was 36 days, while that of Diphtheria was 31.

Of the 61 cases treated, 59 were discharged cured, while two ended fatally, both cases of Scarlet Fever, one of them being a visitor, who arrived here ill.

The following table shows the cost of working for the twelve months :—

EXPENDITURE.

	£	s.	d.
Diet of Patients	156	19	1
Wages and Diet of Nurses	194	7	9
,, ,, ,, Laundress	75	4	8
Porter and Matron	73	8	5
Tradesmen's Accounts	177	0	4*
Rents, Rates, Insurances, &c.	14	3	6
Drugs and Disinfectants	39	5	8
Medical Fees	37	16	0
Conveyance of Patients	14	9	9
Oil, Coke, Coal, and Wood	87	5	7
Rent of Telephone	10	10	0
Legal Expenses	31	18	1
Total	£912	8	10

* This amount includes £86 for painting exterior of buildings, £42 for renewal of stoves, etc., in wood building.

Legal expenses, £32, has been allocated to Hospital Account.

The sum of £113 10s. 6d. was received from paying patients and the Admiralty, so that the total cost of upkeep of the Hospital was £798 18s. 4d. The cost per patient works out at £13 2s.

The following table gives the cost of this and previous years :—

		£	s.	d.
1902	58 patients cost	903	6	6
1903	26 ,, ...	574	12	5
1904	24 ,, ...	48	11	1
1905	72 ,, ...	507	5	0

			£	s.	d.
1906	36	,, ...	541	13	7
1907	46	,, ...	616	12	2
1908	71	,, ...	646	3	6
1909	149	,, ...	1150	2	10
1910	121	,, ...	1139	6	2
1911	145	,, ...	1088	14	3
1912	58	,, ...	751	6	8
1913	61	,, ...	912	8	10

Cockington Sanatorium.

During the year it was not necessary to utilize this building, but it was kept in readiness, so that patients could be received at the shortest notice.

The cost of maintenance is as follows :—

	£	s.	d.
Caretaker	3	15	0
Rents, Rates, Taxes, &c.	80	13	9
	£84	8	9

I am, Gentlemen,

Your obedient Servant,

THOMAS DUNLOP,

Medical Superintendent.

VITAL STATISTICS.

The total deaths registered in the Borough during 1913 was 495, from which we exclude 45 deaths transferred to other districts, and include 71 transferred to this district from outside areas.

The total properly belonging to Torquay was 521—males 238, females 283. This is an increase of 42 over the total for 1912, when the death-rate was well below the average. The death-rate is equal to 13·2 per 1,000 per annum, and is below the average and under the corrected rate for England and Wales, which was 13·4 per 1,000.

The following table gives the Torquay death-rates for recent years, compared with those in England and Wales for the same years :—

Year.	Number of Deaths.	Death-rate corrected.	Death-rate of England and Wales.
1906	464	12·8	15·0
1907	501	13·6	15·0
1908	575	15·4	14·7
1909	437	11·5	14·5
1910	504	13·1	13·4
1911	548	14·1	14·6
1912	479	12·2	13·3
1913	521	13·2	13·4

If we assume that the sex and age constitution of this district has not altered during the intercensal period and correct the death-rate by the old factor, thus making it comparable with that for England and Wales, it would equal 10·6 per 1,000 per annum.

Of the total 521 deaths—

		Percentage of Total Deaths.
58 were under 1 year of age	equals	11·10
4 were 1 year and under 2 years ...	,,	·78
4 were 2 years and under 5 years ...	,,	·78
19 were 5 years and under 15 years ...	,,	3·64
18 were 15 years and under 25 years ...	,,	3·45
43 were 25 years and under 45 years ...	,,	8·25
120 were 45 years and under 65 years ...	,,	23·00
255 were 65 years and over	,,	49·00
521 at all ages		100·00

It will be seen that 255, or 49 % of the total deaths, were of persons aged 65 and upwards.

Ward Distribution of Births and Deaths.

Ward.	All Ages.	Under 1.	Births.
Torre	64	0	42
Waldon	47	4	33
Upton	55	12	87
Ellacombe	87	11	127
Strand	52	12	69
Torwood	54	5	21
St. Mary-Church	67	7	63
Babbacombe	53	3	68
Chelston	42	4	25
Total ...	521	58	535

Infantile Mortality.

There were 58 deaths of children under one year of age, compared with 52 in 1912. As there were 535 births registered, the Infantile Mortality works out at 108 per 1,000 births. The rate for England and Wales for 1913 was 109, and that for the 145 smaller towns 112.

The following table shows the principal causes of death among infants during the past five years.

	1913	1912	1911	1910	1909
Measles	0	1	10	0	1
Whooping Cough ...	4	1	2	1	2
Influenza ...	0	0	0	0	0
Diarrhœa	7	3	14	3	6
Tubercular Diseases	1	1	0	2	2
Bronchitis	6	3	3	4	7
Pneumonia ...	11	9	4	5	2
Premature Birth / Congenital defects	14	25	16	14	11
Accidents ...	3	0	0	1	4
All other causes ...	12	9	14	24	18
Totals	58	52	63	54	53

Fuller particulars, giving exact details as to cause of death and the age, stated in weeks and months under one year, are given in Table IV., page 56.

The Causes of Death.

The Local Government Board Table III. gives the causes and ages at death, *vide* page 54.

Deaths from Zymotic Diseases.

The zymotic death-rate is calculated from the number of deaths due to the seven principal zymotic diseases. The following table gives them and the deaths recorded from each :—

Small-pox	0
Measles	2
Whooping-cough	4
Scarlet Fever	1
Diphtheria	9
Fevers { Typhus / Enteric / Continued }	2
Diarrhœa	10
	28

The death-rate from zymotic diseases for the year is equal to ·71 per 1,000, against ·33 in 1911.

Small-pox.

No cases were notified and consequently no deaths.

Measles.

Measles was first found to be prevalent at the end of June, and in July necessitated the closure of Ellacombe Infants' Schools. During the latter end of October and early in November, the Infants' Department at Homelands was also closed. In the instructions given to Elementary School Teachers I have laid down the principle that children other than those attending infant departments, who are known to have had measles are not to be excluded from school although coming from households where there are cases. It is not unusual to find that when a medical man is attending a case of measles he is asked : Are the

others to go to school? A negative reply is frequently given. In support of my instructions I should like to quote the following from the Annual Report of the Chief Medical Officer of the Local Government Board :—

> "Not infrequently objection is raised to the attendance at school of children, who have had measles and are over the age of attendance in infant schools, who come from households in which there is a case of measles. Such attendance under the common conditions of town life is justifiable, so long as it remains true that most of the children above the infant classes have had measles. All clinical evidence points to the conclusion that measles is infectious chiefly by direct conveyance from the patient, and that its conveyance by fomities in practice is negligible."

The disease has for the most part been mild in character. Two deaths were attributed to this cause.

Whooping Cough

has been epidemic in various parts of the Borough through out the year, necessitating the closure of Cockington Infants' School during part of January and February; St. Luke's Infants' in June, and Ellacombe in September.

It is curious to note that whooping cough epidemics seem to follow in the wake of measles.

Four deaths were attributed to whooping cough.

Influenza.

Five deaths were registered as due to Influenza.

Diarrhœa and Enteritis.

Ten deaths were attributed to Diarrhœa and Enteritis, which is just the average for the past six years. Nine were under one year of age, and one, one to two years. From an examination of Infantile Mortality Table, page 56, it will be seen that five deaths were due to diarrhœa, two to enteritis, and two to gastritis.

As in the previous year, the Sanitary Inspectors made rapid surveys of the yards and back premises in their districts during August and early September, with a view to the early removal of manure and decomposing organic matter, the breeding places of flies.

Tuberculosis.

Phthisis has been compulsorily notifiable during the past two years and all tubercular diseases since February, 1912. The Local Government Board issued an Order which consolidated those previously issued, of which the following is a summary :—

1. The practitioner is not required to notify if he has reasonable ground for believing that the tuberculous patient when first seen by him has already been notified to the Medical Officer of Health of the district in which the patient resides at the time when seen.
2. Notifications are to be sent to the Medical Officer of Health of the district in which the patients are residing, instead of the Medical Officer of Health of the district in which the patient is examined by the doctor.
3. School Medical Inspectors are now required to notify new cases weekly, and send their notifications to the Medical Officers of Health of the districts in which the notified children reside.
4. The Medical Officers of Poor Law Institutions and of Approved Sanatoria are now required to notify all patients admitted to the Medical Officers of Health of the districts from which the patients have been admitted, and all patients discharged to the Medical Officers of Health for the districts to which they are discharged.
5. The diagnosis leading to notification must be based upon evidence other than that derived solely from tuberculin tests applied to the patient.
6. The confidential character of notifications is more strongly emphasised than in the previous regulations.
7. The duty of transmitting to the County Medical Officer of Health weekly lists of cases notified is now imposed not merely on the Medical Officers of Health for the Metropolitan boroughs, but also on the Medical Officers of Health for all Urban and Rural districts.
8. The notification form (Schedule A) has been extended to include the usual place of residence and the occupation of the patient.

9. Fees for notification are not payable to practitioners notifying in their capacity as Medical Officers of Health, Tuberculosis Officers, School Medical Officers, or Medical Officers of Approved Sanatoria.

During the year 145 notifications were received. The following table shows the monthly notifications and under what heading notified :—

TUBERCULOSIS NOTIFICATIONS, 1912.

Month	Form A.			Form B.			Form C.			Form D.			Totals.
	Residents	Visitors	Total	Residents	Visitors	Total	Residents	Visitors	Total	Residents	Visitors	Total	
January ...	5	1	6	—	—	—	—	3	3	—	—	—	9
February ...	6	6	12	2	—	2	1	—	1	—	—	—	15
March ...	45	4	49	—	—	—	—	1	1	—	—	—	50
April ...	7	—	7	—	—	—	—	—	—	—	—	—	7
May... ...	6	2	8	—	—	—	—	—	—	—	—	—	8
June ...	5	1	6	1	—	1	—	—	—	—	—	—	7
July ...	3	1	4	—	—	—	1	1	2	1	1	2	8
August ...	2	—	2	—	—	—	—	—	—	—	—	—	2
September ...	10	—	10	—	—	—	1	—	1	1	1	2	13
October ...	7	1	8	—	—	—	3	—	3	—	2	2	13
November ...	3	2	5	—	—	—	1	—	1	1	—	1	7
December ...	6	—	6	—	—	—	—	—	—	—	—	—	6
Totals ...	105	18	123	3	—	3	7	5	12	3	4	7	145

NOTE.—Form A. Form of Notification of all cases not previously notified.
Form B. Form of Notification by School Medical Officer.
Form C. Form of Notification by Medical Officer of Poor Law Institutions and Sanatoria of patients previously notified before admission.
Form D. Form of Notification ditto, of discharge.

Every Monday morning a detailed list of the notifications received for the previous week is forwarded to the County Medical Officer of Health. On the receipt of a notification, unless the Medical Attendant informs me that a visit is unnecessary by reason of the patient's circumstances being such that all precautions can be taken, and that he has given proper instructions, I personally visit and obtain particulars as regards possible source of infection, family history, and general circumstances, give instructions as to precautions to be taken, etc., and, if an insured person, advise application to be made for Sanatorium benefits, etc. Note is made of children in the family, and if attending elementary schools the School Medical Inspector is informed, the children are examined, and afterwards kept under observation. Sputum flasks and disinfectants are supplied free and after death or removal, the rooms, etc., are disinfected free. Medical practitioners can have sputum examined free of cost. In all insured cases the patient is at an early date visited by the County Tuberculosis Officer who advises as to the line of treatment to be adopted. Early cases are sent to the County Sanatorium at Hawkmoor, in others domiciliary treatment is given and most cases persuaded to attend at the Tuberculosis Dispensary, now taken over by the County Authority, not necessarily for treatment with tuberculin, but where they are kept under observation, weights taken and temperature charts examined, etc.

The great weakness in all precautions is the want of institutional care of the advanced and dying cases. The only provision for such is the Workhouse Infirmary, where, although they receive every comfort, the patients are unwilling to go, the result being that during the most infectious period of their illness, they remain at home and are a source of danger to others.

It is necessary to remember, when considering the incidence of such a disease as Phthisis in a district as Torquay, that the climate has attractions for such persons. Consumption is a disease which may last many months, or even years, and it is common to find persons suffering from it coming here and taking up their residence, and when death occurs, it is included in the statistics of the Borough. During the year at least three persons who have come from abroad have died here, and having no other residence in this country, have also been included.

Visitors dying here are now transferable to their own districts, and these include those who die in the consumptive homes, of

which there are four, which admit patients from different parts of the country. One is often asked, "Are not these places a source of great danger to the surrounding residents?" I do not think they are, as I believe that all patients are quickly instructed as to the precautions it is necessary to take, and every care is taken in the homes themselves.

During the year 43 deaths were registered, of whom nine were visitors transferable to other districts. Sixteen deaths occured, in which no notification of the the disease had been received by me. Five were of visitor inmates of Consumptive Homes, three were inmates of the County Asylum, and one from the Workhouse Infirmary at Newton Abbot.

The following table gives the age and sex at death.

	Under 5 years	5—15	15—25	25—45	45—65	over 65	Totals
Males	Nil	Nil	2 Residents	6 Residents	4 Residents	2 Residents	14 Residents
			1 Visitor	4 Visitors	1 Visitor	0 Visitors	6 Visitors
Females	Nil	1 Resident	3 Residents	9 Residents	7 Residents	Nil	20 Residents
		0 Visitors	0 Visitors	3 Visitors	0 Visitors		3 Visitors

It will be seen from the above that there are more female deaths than males. This is contrary to what usually obtains in urban districts, but here it is no doubt due to the larger number of females than males in the population.

Excluding the deaths of nine visitors, tranferable to other areas, the total deaths belonging to this district are 34 against 28 in 1912. This gives a rate of ·86 per 1,000 of the population.

Cancer.

Fifty-two deaths were registered as due to Cancer, seven more than in 1912. In considering the death-rate from such a cause as Cancer, which essentially affects people in the prime and

latter part of life, and more especially females, it must be remembered that communities such as Torquay, whose populations have a larger proportion of such people than the country generally, will suffer more severely.

The death-rate from Cancer in Torquay during 1912 was 1·3 per 1,000 of the population. If this rate is corrected for age and sex distribution to make it comparable with that for England and Wales, it would be 1·0 per 1,000.

Age and Sex Distribution of Cancer Deaths.

	under 30	30—35	35—45	45—55	55—65	65—75	over 75	Totals
Males	0	1	1	4	4	8	2	20
Females	0	1	3	6	6	14	2	32
Total	0	2	4	10	10	22	4	52

Acute Poliomyelitis.

In June I received four notifications of this disease, but after examinations I did not consider them such. In order to be certain, Dr. Adkins kindly came down and saw them and confirmed my opinion. The further history proved them not to be.

SANITARY WORK, 1913.

No changes have been made in the Staff of the Sanitary Department. There are three Inspectors to each of whom is allotted a district over which they have full charge, *vide* p. 57.

In September we removed from our old quarters to the offices in the new Town Hall, where ample accommodation is provided. This change greatly facilitates our work, as we are in touch with our colleagues in the other departments.

Inspection of Meat, Slaughter-Houses, Etc.

There can be no doubt but that the inspection of the meat supply to the Borough is now firmly established and carried out in as satisfactory a manner as is possible, considering the number

of private slaughter houses, their distance apart, that many of the butchers kill in slaughter-houses just outside the Borough boundary, and that much meat is hawked in the town which is brought in from adjoining districts.

It is the custom for local butchers to visit Newton Abbot on market days and buy best portions of carcases of cattle and pigs. Occasionally when these are brought to their shops in Torquay and inspected, they have been found to be diseased and have been seized, which naturally causes considerable irritation. In order to avoid this trouble and recognising the necessity for inspection, the local Butchers' Association have suggested that a system of marking or stamping meat, on similar lines to that in vogue with Colonial meat might be, with advantage to the trade and the public, adopted by the Authorities at Newton Abbot and in this Borough. If such a practice could be established, the time would no doubt arise when purchasers would require to see the Inspector's stamp before buying. I know that the suggestion is receiving the sympathetic consideration of the Medical Officer of Health at Newton, and I consider it a matter which should receive the support of your Council.

It seems curious that there are few, if any, laboratories where veterinary pathological specimens can be sent for examination and report. Probably in time, when the inspection of meat is carried out on more scientific lines, they will arise to meet the demand. On occasions, obscure conditions are found, which necessitate the seizure of organs, but it is somewhat difficult to say what the pathological lesion is. Owing to this, Mr. Body has during the year taken up the preparation and cutting of sections for microscopical examination, to do which the Council have provided a microtome. The microscopic examination, together with the naked eye appearance, renders it possible in most cases to form an opinion of the morbid condition.

A consideration of Mr. Body's report shows abundantly from the number of visits paid to slaughter-houses, butchers' shops, the market, etc., and the amount of diseased and unsound meat seized and destroyed, that not only is the work efficiently done, but that such work is essential.

Tuberculosis in Pigs. Since meat inspection has been carried out as a routine duty we find a reduction in the number of animals affected. This year it is 4·3 per cent. ; last year it was

8. This reduction is more apparent in pigs bred in the Borough, as pig keepers find that it pays to take greater precautions in disinfecting and ventilating houses, and in breeding from sound stock.

There are eight slaughter-houses in the Borough. Two are registered, the other six licensed. They are regularly visited and are kept in a satisfactory condition. Besides visits to the above, frequent inspections are made of butchers' shops, butchers' vans from which meat is hawked, and also of the places where sausages are prepared.

The Fish Quay is inspected regularly, and on the whole the quality is satisfactory.

Under the American Gooseberry Mildew Order, during the season visits of inspection are made to the greengrocers' shops; no cases were detected.

For further details as to the work done, I would draw your attention to Mr. Body's report dealing with the subject on page 00.

Sale of Food and Drugs Act.

Samples are taken by the County Police. Through the courtesy of Superintendent Roberts, I am enabled to give the following table, showing the number of samples taken and the result :—

No.	Articles.	Result of Analysis.	Action Taken.
5	Bread	Genuine	Nil
7	Butter	Genuine	Nil
2	Cheese	Genuine	Nil
2	Chicory & Coffee	Genuine	Nil
4	Cocoa	Genuine	Nil
1	Flour	Genuine	Nil
4	Ginger	Genuine	Nil
3	Honey	Genuine	Nil
6	Cream	One contained 7 grs. boracic acid to the lb.	Vendor summoned, case proved—dismissed
2	Lard	Genuine	Nil
41	Milk, New	Four samples deficient in milk fat from 6·6 % to 13 %. One contained 9 % added water.	Two cases, vendors cautioned. Three cases proved, but dismissed
	Milk, Skimmed	Contained 2·5 % added water	Vendor cautioned
1	Milk, Pasteurized	Genuine	Nil
1	Milk, Scald	Genuine	Nil
2	Oatmeal	Genuine	Nil
3	Sago	Genuine	Nil
2	Sugar, Moist	Genuine	Nil
3	Rice	Genuine	Nil
1	Tea	Genuine	Nil
1	Vinegar, Malt	Genuine	Nil
2	Margarine	Genuine	Nil
3	Olive Oil	Mineral oil supplied in error	Nil
1	Mustard	Genuine	Nil
2	Sweets	Genuine	Nil
99			

For some time milk has been hawked in large quantities in the Borough, which, when a sample is taken, is described as "Pasteurised Skimmed Milk." The report on an analysis states that the sample is deficient to the extent of 63·4%, there being only 1.1% present. This substance is practically a separated milk (the cream being removed for use of a large cafe) to which a small proportion of ordinary milk is added. I found in one instance that a patient suffering from phthisis was using the "milk" and thought that as it was described as Pasteurised, he had got hold of something good and cheap. I brought the subject before the Sanitary Committee and was instructed to have the following poster placarded throughout the district :—

BOROUGH OF TORQUAY.

CAUTION TO PARENTS.

PASTEURISED SKIMMED MILK is being extensively sold in the Borough. Parents are warned that milk of this description is absolutely unsuitable to give to Infants and Invalids.

It is very deficient in Milk Fat and therefore means gradual starvation to children fed with it.

It is dear at the price it is sold at, and therefore false economy to purchase it.

Farmers find it useless for feeding pigs or calves unless mixed with better foods.

PURE MILK.	ANALYSIS.	PASTEURISED SKIMMED MILK.
1032	Specific gravity	1032
3·7 per cent.	MILK FAT	1·1 per cent.
9·1 ,,	Other solids	8·5 ,,
12·8 ,,	TOTAL SOLIDS	9·6 ,,

Note the deficiency of Solids and Fats.

THOMAS DUNLOP, M.B., D.P.H.,

Medical Officer of Health.

MILK SUPPLY.

There are 98 registered dairymen and cowkeepers in the Borough, most of whom receive milk from farms situated outside.

The system in vogue of inspecting these outside farms has been carried out twice during the year.

Particulars are obtained of the condition of the cowsheds as to cleanliness, lighting, ventilation, and paving; the washing of milk vessels; cleanliness of dairies, etc., the water supply as regards its freedom from pollution; and the number and condition of the cows being milked.

After these inspections, a complete register is compiled of all dairies and cowsheds in the Borough, together with the farms outside which supply them with milk, etc. The register is printed in the form of a bill, and is posted up throughout the town, copies being forwarded to all dairymen and farmers concerned. Such bills are a guarantee that we are satisfied with the Sanitary state of the places inspected, and is in force for six months. Thus two thorough inspections are made each year.

Although this periodic inspection cannot guarantee that the cowsheds, etc., are constantly kept as they ought to be, yet it ensures that at least twice a year they get a thorough cleaning and lime-washing, which in many instances would not be done if the visits were not made. It is also frequently possible for us to get owners to substitute brick or concrete for defective cobble paving, which reduces the difficulty of cleaning to a minimum. Again, by this system we know precisely what farms supply the various town purveyors, and have a full knowledge of the farm, water supply, and other details which are of immense value when investigating the source of infectious disease.

A point that apparently receives too little attention from the farmers is the proper grooming of their cows, the cleansing of their udders, and the hands of the milkers. Two much faith is put in the efficiency of the strainer.

In South Devon, where it is possible to keep cows in the open air night and day for the greater portion of the year, tubercular disease in cattle should be less prevalent than in other places where the climatic conditions are less favourable.

Under the Tuberculosis Order, 1913, which provides for the efficient inspection of all milch cows by Veterinary Inspectors, and for the compulsory slaughter of all animals found to be suffering from tuberculosis of the udder, or showing definite signs of the

disease, and for compensation of owners for the loss sustained, only one suspected case was notified, but on examination did not prove to be tuberculous. The other cows in the herd, 16 in number, were subjected to the tuberculin test and found free from disease.

Ice Cream.

There are two manufacturers of ice cream, which is hawked in the streets from barrows or vans. Their premises were inspected and found to be clean, and apparently well looked after. The premises of confectioners, etc., were inspected when the bake-houses were visited.

Housing and Town Planning Act.

All the Inspectors are appointed inspectors to carry out this Act in their respective areas, and I have with them visited the houses prior to any report being presented to the Sanitary Committee. Complete records are kept of the conditions found and the alterations carried out to remedy.

The estimated number of dwelling houses in the district is 8,137 and of this number about 4,170 are under the limit of £16 rental laid down in Section 14 of the Act.

The method adopted to carry out the provisions of this Act have, up till now, been for me to recommend to the Sanitary Committee that the inspection of the houses in a certain area is desirable. Instructions are then given for this to be done. Notices under Section 15 are served of intention to inspect, when full details as to the sanitary condition of the premises is elicited. On the completion of the work, these are laid before a Sub-Committee who, after consideration and frequently after inspection, recommend to the full Committee, either, the service of notices to put the house into a reasonably habitable condition, or for the issue of closing notices where required. When this has been done, they are followed up until all that is necessary is done. The following of this routine occupies considerable time and entails much clerical work on the part of the Inspectors.

No attempt has yet been made to inspect what may be termed the better class workmen's habitations of fairly modern construction, which form a large proportion of the houses under the rent limit laid down. Many of these, however, come in for inspection yearly when investigating the causes of infectious sickness and for the abatement of nuisances.

During recent inspections many houses have been found which come under the category of houses let in lodgings, and I have been instructed to obtain particulars with a view to the Authority adopting Bye-Laws for their regular inspection, etc.

Information and particulars as to inspections made under the Housing, Town Planning Act, 1909 :—

Number of houses inspected	138
Number considered to be in such a state so dangerous or injurious to health as to be unfit for human habitation	5
Number of representations made with a view of the making of Closing Orders	5
Number of Closing Orders made	5
Number of dwelling houses in which defects were remedied without making Closing Orders ...	110
Number of dwelling houses which after the making of Closing Orders were put in a fit state for human habitation	5
General character of defects found to exist ...	Defective ventilation, windows not opened at tops, drainage, damp walls. defective roof, eaves guttering, yard paving, improper ash accommodation, interior of houses dirty and general delapidations. See Table appended.

Tables showing character and number of defects found when inspecting premises under the Housing, Town Planning Act, 1909 :—

	No. of Defects.
Walls and ceilings of rooms cleansed and limewashed Ditto of staircases and passages cleansed and limewashed	32
External walls of houses repaired	21
Roofs of houses repaired	16
Floors, doors, and windows in houses repaired ...	35
Eaves guttering and down spouting cleaned and repaired	25

	No. of Defects.
Drains relaid or repaired	7
Yards of houses repaired or repaved	17
Galvanised iron ash receptacles provided ...	4
Storage cisterns abolished and water laid on from the town main	1
Water closets and flushing cisterns repaired ...	17
Glazed stoneware sinks fixed	0
Bed and living rooms ventilated	44
Other defects	88
Total defects found	333
Total defects remedied	333
On books at end of year	41

NOTE.—This does not include notices with regard to 26 houses in Pimlico inspected during 1913, but only served in 1914.

SANITARY INSPECTION OF THE DISTRICT.

TABULAR STATEMENT.

District Inspections	340
Under Housing and Town Planning Act	138
For Sanitary Certificates	59
Preliminary Notices (letters)	610
Statutory Notices	86
Legal Proceedings	1

This table does not include re-visits to work in hand or routine inspections of slaughter houses, dairies, common lodging houses, etc.

FACTORY AND WORKSHOPS.

Each Inspector has charge of the Workshops in his area and is responsible for their inspection. In the Home Office table on page 00, the totals for the whole Borough are given.

The large dressmaking and millinery establishments provide ample accommodation for the employees, and on the whole they are quite satisfactory. Most of these I visit in company with the Inspectors. There are many small dressmakers who utilise a room in their houses and employ one or two assistants.

In Torquay a very large proportion of the workshops are laundries, where in most instances only a few women are employed. They are generally kept clean and limewashed.

Bakehouses.

I make a point of visiting these with the Inspectors. There are 52 on the register. Three have certificates as satisfactory underground bakehouses. For the most part the bakehouses are well looked after and regularly limewashed. Some occupiers, however, require constant supervision to effect even moderate cleanliness.

Offensive Trades.

There is only one tripe boiling establishment in the Borough. It is situated at the upper end of Upton. The building is specially adapted for the pupose, and is always found clean and well looked after.

Marine Stores.

The powers conferred by the Public Health Acts Amendment Act, 1907, in dealing with marine storekeepers have been enforced. All such persons in the Borough have been registered and their premises regularly inspected. From a sanitary point of view this is desirable, as many store bones, often in large quantities, which are a nuisance and a menace to the health of the surrounding inhabitants.

Common Lodging Houses.

There are eight common lodging houses in the Borough, whose keepers and deputy keepers are registered. They are regularly inspected and kept clean.

Inspections of Schools, Etc. Sanitary Condition, Etc.

Besides the inspection of the Schools made by Dr. Ellis and myself, the Inspectors make regular monthly visits, to examine the condition of the latrines, etc., the results being reported to the Committee. The offices are on the whole satisfactory and well looked after.

Port Sanitary Work.

This special duty is carried out by Mr. Watson and from the number of inspections made it will be seen that it is efficiently performed. This report also shows the number and character of defects found. No cases of illness were reported from any of the ships.

The administration of the Factory and Workshop Act, 1901, in connection with FACTORIES, WORKSHOPS, WORKPLACES, & HOMEWORK.

1.—INSPECTION OF FACTORIES, WORKSHOPS, & WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of Inspections. (2)	Number of Written Notices. (3)	Number of Prosecutions. (4)
Factories .. .. (Including Factory Laundries)	7		—
Workshops .. .. (Including Workshop Laundries)	318	21	Nil
Workplaces .. .. (Other than Outworkers' premises included in Part 3 of this Report.	2		—
Total	327	21	—

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, & WORKPLACES.

Particulars. (1)	Number of Defects. Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	Number of Prosecutions. (5)
Nuisances under the Public Health Acts :—				
Want of cleanliness	29	29	1	—
Want of ventilation	1	1	—	—
Overcrowding	1	1	—	—
Want of drainage of floors	0	—	—	—
Other nuisances	23	23	—	—
Sanitary accommodation — insufficient	1	1	—	—
Sanitary accommodation — unsuitable or defective ..	0	0	—	—
Sanitary accommodation — not separate for sexes ..	0	0	—	—
Offences under the Factory & Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)				
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)				
Other offences .. .. (Excluding offences relating to outwork which are included in Part 3 of this Report.)	0	0	—	—
Total	55	55	1	—

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.												OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Addresses of Outworkers			Prosecutions.		Inspections of Outworkers' premises.						
	Sending twice in the year.			Sending once in the year.														
		Outworkers.			Outworkers.													
		Contractors.	Workmen.	Lists.	Contractors.	Workmen.	Received from other Councils.	Forwarded to other Councils.	otices ved on cupiers as to eping or ending Lists.	Failing to keep or permit inspection of lists.	Failing to send lists.		In-stances.	Notices served.	Prosecutions.	In-stances.	Orders made (s. 110).	Prosecutions (Sections 109, 110).
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	15)	(16)	(17)	(18)	(19)
Wearing Apparel— (1) making, &c.	21	—	32	2	—	3	2	—	65	—	—	9	—	—	—	—	—	—
(2) cleaning and washing ..																		
Lace, lace curtains, and nets																		
Artificial flowers ..																		
Nets, other than wire nets																		
Tents																		
Sacks																		
Furniture and upholstery																		
Fur pulling ..																		
Feather sorting ..																		
Umbrellas, &c. ..																		
Carding, &c., of buttons, &c.																		
Paper bags & boxes																		
Basket making ..																		
Brush making ..																		
Racquet and tennis balls																		
Stuffed toys																		
File making																		
Electro plate ..																		
Cables and chains ..																		
Anchors & grapnels																		
Cart gear																		
Locks, latches, and keys																		
Pea picking																		
Total	21	—	32	2	—	3	2	—	65	—	—	9	—	—	—	—	—	—

4.—REGISTERED WORKSHOPS,

Workshops on the Register (s. 131) at the end of the year. (1)		Number. (2)
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Laundries	111
	Dressmakers and Milliners	79
	Tailors	43
	Bakers, &c...	45
	Total number of workshops on Register ..	278

5.—OTHER MATTERS.

Class. (1)		Number. (2)
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act (s. 133)		8
Action taken in matters referred by H.M. Inspecter as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.m. Inspector ..	1
	Report (of action taken) sent to H.M. Inspector ..	—
Other		1
Underground Bakehouses (s. 101):—		
Certificates granted during the year		—
In use at the end of the year		3

Table I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.*		Nett Deaths belonging to the District.			
			Nett.						Under 1 year of age		At all ages.	
		Uncorrected Number.	Number.	Rate.	Number.	Rate.	of Non-Residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908.	37230	517	524	14·0	580	15·5	46	41	73	139	575	15·4
1909.	37745	567	575	15·2	452	11·9	54	39	53	92	437	11·5
1910.	38260	535	539	14·0	517	13·5	54	41	53	98	504	13·1
1911.	38772	529	536	13·8	562	14·4	56	42	63	117	548	14·1
1912.	39000	560	571	14·6	485	12·4	58	52	52	91	479	12·2
1913.	39250	530	535	13·6	495	12·6	45	71	58	108	521	13·2

Area of district in acres (land and inland water) 3,906. Total population at all ages, 38,772. Number of separate occupiers, 8,459.
Average number of persons per house, 4·6. At Census 1911 (cf. Census, Vol. V.)

TABLE II.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1913.

NOTIFIABLE DISEASE.	Number of Cases notified.								Total cases notified in each locality.									Total cases removed to hospital
	At all ages.	At Ages—Years.							Torre	Waldon	Upton	Ellacombe	Strand	Torwood	S. Marych.	Babc'mbe	Chelston	
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards										
Small-pox ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Cholera ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Diphtheria.incl'd'g Membranous croup	107	—	10	86	6	4	1	—	5	4	11	23	12	4	41	5	2	89
Erysipelas ..	5	—	1	—	1	2	—	1	-	-	-	1	-	2	1	-	1	—
Scarlet fever ..	56	—	19	24	7	5	1	—	11	4	6	17	2	1	3	3	9	47
Typhus fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Enteric fever ..	21	—	2	8	6	5	—	—	3	1	1	3	9	-	3	-	1	13
Relapsing fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Continued fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Puerperal fever ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Cerebro-spinal Meningitis ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Poliomyelitis ..	—	—	—	—	—	—	—	—	-	-	-	-	-	-	-	-	-	—
Pulmonary Tuberculosis ..	127	—	—	9	30	72	14	2	19	12	13	29	8	20	13	6	7	—
Other form of Tuberculosis ..	19	—	1	8	3	7	—	—	1	1	3	3	2	1	5	1	2	—
Totals ..	335	—	33	135	53	95	16	3	39	22	34	76	33	28	66	15	22	149

Isolation Hospital :—Borough Sanatorium, Newton Abbot Road, outside the Borough.

Total available beds, 14. Number of Diseases that can be concurrently treated, 2.

TABLE III. CAUSES OF, AND AGES AT, DEATH DURING YEAR 1913.

CAUSES OF DEATH.	Net deaths at the subjoined ages of Residents whether occurring within or without the District (a).									Total Deaths whether of Residents or non Residents in Public Institutions in the District
	All ages.	under 1	1 and under 2	2 and under 5	5 and under 15.	15 & under 25.	25 & under 45.	45 & under 65.	65 & upwards	
All causes { Certified (c)	514	56	4	4	19	18	43	119	252	41
All causes { Uncertified	6	2	—	—	—	—	—	1	3	—
Enteric Fever ..	2	—	—	—	—	2	—	—	—	2
Small-pox	—	—	—	—	—	—	—	—	—	—
Measles	2	—	—	1	1	—	—	—	—	—
Scarlet Fever ..	1	—	—	—	1	—	—	—	—	—
Whooping-cough ..	4	4	—	—	—	—	—	—	—	—
Diphtheria & croup	9	—	—	—	9	—	—	—	—	—
Influenza	5	—	—	—	—	—	—	3	2	1
Erysipelas ..	—	—	—	—	—	—	—	—	—	—
Phthisis (Pulmonary Tuberculosis) ..	34	—	—	—	1	4	15	12	2	11
Tuberculous Meningitis	1	1	—	—	—	—	—	—	—	1
Other tuberculous diseases	4	—	—	—	1	1	1	1	—	—
Cancer, malignant disease ..	52	—	—	—	—	1	4	21	26	5
Rheumatic Fever ..	—	—	—	—	—	—	—	—	—	—
Meningitis (*See* note *d*)	1	—	—	1	—	—	—	—	—	—
Organic Heart Disease	44	—	—	—	1	—	5	13	25	3
Bronchitis ..	41	7	1	1	—	—	1	6	25	2
Pneumonia (all forms)	26	11	—	—	—	1	2	5	7	2
Other diseases of respiratory organs	12	—	—	—	—	—	1	3	8	—
Diarrhœa and Enteritis (*See* note *e*)	10	9	1	—	—	—	—	—	—	—
Appendicitis and Typhlitis ..	3	—	—	—	2	1	—	—	—	2
Cirrhosis of liver ..	4	—	—	—	—	—	1	3	—	—
Alcoholism ..	—	—	—	—	—	—	—	—	—	—
Nephritis & Bright's disease	14	—	—	—	—	1	2	4	7	1
Puerperal fever ..	—	—	—	—	—	—	—	—	—	—
Other accidents and diseases of Pregnancy and Parturition	3	—	—	—	—	1	2	—	—	—
Congenital Debility and Malformation, including Premature Birth ..	10	10	—	—	—	—	—	—	—	2
Violent Deaths, excluding Suicide ..	11	3	1	—	—	2	1	1	3	1
Suicides	2	—	—	—	—	—	—	1	1	—
Other Defined Diseases	137	5	—	1	3	4	4	41	79	8
Diseases ill-defined or unknown ..	89	8	1	—	—	—	4	6	70	—
	521	58	4	4	19	18	43	120	255	41

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death.

(*a*) All "transferable deaths" of residents, *i.e.*, of persons resident in the district who have died outside it, are *included* with the other deaths in columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who have died in the district, are in like manner *excluded* from these columns.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

(*b*) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or non-residents, are to be entered in the last column of Table III.

(*c*) All deaths certified by registered medical practitioners, and all inquest cases, are to be classed as "Certified;" all other deaths are to be regarded as "Uncertified."

(*d*) Exclusive of "Tuberculosis Meningitis" (10), but inclusive of Cerebro Spinal Meningitis.

(*e*) Title 19 should be used for deaths from Diarrhœa and Enteritis at all ages. (In the "Short List" deaths from Diarrhœa and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

TABLE IV.

INFANT MORTALITY DURING THE YEAR 1913.

NETT DEATHS FROM STATED CAUSES AT VARIOUS AGES UNDER ONE YEAR OF AGE

CAUSE OF DEATH.	Under 1 Week.	1—2 Weeks.	2—3 Weeks.	3—4 Weeks.	Total under 1 Month.	1—3 Months.	3—6 Months.	6—9 Months.	9—12 Months.	Total Deaths under One Year.
ALL CAUSES. Certified ..	7	3	2	4	16	9	12	11	8	56
ALL CAUSES. Uncertified ..	1	-	-	-	1	1	-	-	-	2
Small-pox	-	-	-	-	—	-	-	-	-	—
Chicken-pox	-	-	-	-	—	-	-	-	-	—
Measles	-	-	-	-	—	-	-	-	-	—
Scarlet Fever	-	-	-	-	—	-	-	-	-	—
Whooping Cough	-	-	-	-	—	1	-	2	1	4
Diphtheria and Croup ..	-	-	-	-	—	-	-	-	-	—
Erysipelas	-	-	-	-	—	-	-	-	-	—
TuberculousMeningitis ..	-	-	-	-	—	-	-	1	-	1
Abdominal Tuberculosis(*b*)	-	-	-	-	—	-	-	-	-	—
Other Tuberculous Diseases	-	-	-	-	—	-	-	-	-	—
Meningitis *(not Tuberculous)*	-	-	-	-	—	-	-	-	-	—
Convulsions	2	-	-	-	2	1	-	-	1	4
Laryngitis	-	-	-	-	—	-	-	-	-	—
Bronchitis	-	-	-	-	—	1	2	1	2	6
Pneumonia (all forms) ..	-	1	1	-	2	1	-	5	3	11
Diarrhœa	-	-	-	-	—	1	3	-	1	5
Enteritis	-	-	-	-	—	1	-	1	-	2
Gastritis	-	-	-	1	1	-	1	-	-	2
Syphilis	-	-	-	-	—	-	-	-	-	—
Rickets	-	-	-	-	—	-	-	-	-	—
Suffocation, overlying ..	-	-	-	-	—	1	2	-	-	3
Injury at Birth	-	-	-	-	—	-	-	-	-	—
Atelectasis	-	-	-	-	—	-	-	-	-	—
Congenital Malformations (*c*)	-	-	-	-	—	-	-	-	-	—
Premature Birth	3	1	1	1	6	2	1	-	-	9
Atrophy, Debility, and Marasmus	1	-	-	-	1	1	3	-	-	5
Other Causes	2	1	-	2	5	-	-	1	-	6
	8	3	2	4	17	10	12	11	8	58

District (or Sub-Division) of NEWTON ABBOT.

POPULATION.

Births in the year { legitimate - 508. illegitimate - 27.

Estimated to middle of 1913, 39,250.

Nett Deaths in the year of { legitimate infants 53. illegitimate infants 5.

Deaths from ALL CAUSES AT ALL AGES, 521.

BOROUGH OF TORQUAY.

CHIEF SANITARY INSPECTOR'S REPORT.

TOWN HALL, TORQUAY,

12th March, 1914.

To the Worshipful the Mayor, Alderman and Councillors of the Borough of Torquay.

GENTLEMEN,

For the thirty-sixth time I have the honour of presenting my Annual Report to the Urban Sanitary Authority for the District.

Sanitary duty during the year just past, has been of a similar character to that of several previous years. The Wards of Torre, Waldon, Chelston, and portions of the Strand and Upton under my direct responsibility, have been dealt with generally and particularly for the prompt suppression of insanitary conditions and the reconstruction of defective drains or sanitary appliances.

In addition to work under the Public Health Act, 1875, duties under the Milkshops and Dairies Order, 1886, the Factories and Workshops Act, and the Town Planning Act, have demanded special and regular attention, the requirements of the Local Government Board being stringent and specific in all these matters. Each section of operations will be found dealt with seriatim in a set of tables which I have specially prepared.

The salient feature of the year's work, over and above the ordinary routine, was the careful and thorough inspection of two of the oldest small quarters of Torre, viz., a court at the top of South Street, comprising 15 houses and tenements, and Church Lane, having fifty-one separate habitations. The requisite notices of entry, and for the execution of works, were duly served on the owners, and I am glad to report that with the exception of two houses in Church Lane, all have been put in good sanitary condition. These latter belong to a poor widow.

who has been impoverished by having to carry out similar improvements in another quarter of the Borough, and asks for breathing time to do the necessary work.

Sanitary certificates were applied for in twenty-seven instances, chiefly on account of selling or letting houses, but several were given on account of owners complying with the Council's requirements, after sickness or nuisance had been complained of.

The following table manifests the various details of sanitary operations considered necessary at the several houses dealt with.

Details of Sanitary Operations.

22	New Sanitary Conveniences fixed, one of which was newly built.
44	Flushing cisterns were provided or repaired.
15	New sets of house drains were laid.
84	Intercepting and gully traps fixed.
37	Inspection chambers built.
17	Fresh air inlets provided.
19	Soil pipes fixed and ventilated.
3	Old masonry drains or traps abolished.
14	Blocked drains were cleared.
20	Yards were paved and drained.
31	Rooms provided with better light and ventilation.
44	Premises were cleansed and limewashed.
37	Rooms fumigated after infectious diseases.
37	Damp premises remedied.
28	Waste pipes disconnected from drains or trapped.
21	Offensive accumulations removed.
10	Ashbins provided in lieu of old pits.
2	Dirty tanks were cleansed and covered.
6	Pig and fowl nuisances abated.
26	Defective drains repaired.
4	Cases of overcrowding abated.
7	Stoneware troughs fixed.
26	Roofs guttering and down spouting repaired.
4	Grease traps fixed.
1	Waste of water discovered.
71	Premises repaired.
1	Water supplied from main.
1	Ashpit covered.

Disinfectants supplied to 1,219 poor persons for use in washing floors, and eventually deodorizing the drains.

The diseases after which fumigation took place were as follows :—

Diphtheria 7 Phthisis 11 Scarlet Fever 14
Cancer 3 Influenza 2

Two hundred and twenty-one letters or notices were sent to owners and occupiers respecting the above-named matters. Twenty-three sketch plans of premises where new drains have been laid, were drawn during the year, and one plan was made to scale under the Housing and Town Planning Act, 1909, of South Street Court, Torre.

Information and Particulars as to Inspections made under the Housing and Town Planning Act, 1909.

Number of houses inspected	68
Number of dwelling houses in which defects were remedied	46
Closing Orders issued and subsequently removed	2

Details of Work carried out under the Town Planning Act.

23 Walls, ceilings, staircases and passages cleansed and limewashed.
21 External walls repaired.
5 Roofs repaired.
14 Floors, doors and windows repaired or renewed.
9 Eaves, guttering and down spouting.
1 Drain repaired.
5 Yards of houses repaired.
5 Yards of houses repaved.
2 Galvanized bins provided.
2 Water closets renewed.
2 Water closets repaired.
4 Flushing cisterns fixed or repaired.
23 Rooms provided with better light and ventilation.
5 Wash-houses repaved.
13 Gullies fixed in lieu of Bell and "D" traps
21 Dampness remedied.
2 Rain pipes disconnected from drains.
1 Manure pit provided with better means of cleansing.
1 Ashpit covered.
1 Water supplied from main.
1 Boiler fixed.

Closing Order, Town Planning Act.

An order in respect of two dirty and dilapidated cottages on Warren Hill was issued and complied with ; the owner, however, set to work and put them in thorough repair, and, after re-inspection, the order was removed, and the houses were re-occupied.

Drain Tests.

One hundred and seventy-six tests were applied to drains, viz., ninety smoke, seventy-five water, and eleven chemical.

Fish Condemned.

Just before the August Bank Holiday, I was requested to examine a quantity of fish sent from Grimsby to a fried fish restaurant at Torre. I had no hesitation in pronouncing it unsound and unfit for food and ordered it to be destroyed.

Elementary Schools.

The Schools at Torre, Cockington, Church of the Assumption, and St. Luke's, were regularly visited in respect of the sanitary conveniences, and I am glad to state they appeared to receive due attention by the caretakers.

Marine Store.

The principal store situate in Lower Union Lane has had a monthly visit, and any irregularity as to clearance of bones and skins or cleanliness has been pointed out and promptly remedied.

Common Lodging House.

Frequent visits at irregular intervals have been made to this considerable habitation for poor travellers, and I am bound to say that it is clean and creditable in every respect, rooms, bedding and general cleanliness of the entire premises, inside and out.

Workshops and Workplaces.

I have made an examination of 50 Workshops and Workplaces, viz. : —

20 Dressmakers and milliners.
5 Tailors.
2 Boot and shoe makers.
1 Umbrella maker.
2 Laundresses.
5 Carpenters and builders.
4 Painters and plumbers.
1 Blacksmith.
1 Upholsterer.
1 Watchmaker.
2 Coach builders.
2 Marble masons.
2 Printing works.
2 Cabinet makers.

The following nuisances or defects were observed and notice given to rectify.

4 Foul pans cleansed.
3 Cisterns provided or repaired.
11 Premises cleansed and limewashed.
1 Vent pipe repaired and raised.
1 Dampness remedied.
1 Blocked drain cleared.
1 W.C. door repaired.
1 Offensive accumulation removed.
2 Ashpits covered.

Dairies and Milkshops.

Twenty-two Dairies and Milkshops in my wards were inspected twice during the year; also nine farms outside the Borough, at Cockington, were similarly visited. Some of these latter, not being found satisfactory on the first occasion, were examined soon afterwards and the requisite limewashing had been done.

Bakehouses.

The fifteen Bakehouses in this District were duly inspected and attention given to Sanitary requirements.

I have no special matter to bring under the notice of the Council, unless it be to say that my two pupils, one of four years' service and the other of nearly three, have duly passed the Examination of the Royal Sanitary Institute within a year, and I find their services in all branches of the work of the Department, eminently useful and satisfactory.

I am, Gentlemen,

Yours most obediently,

CHARLES MacMAHON, C.E.,

C.R. San. Inst., A.M.R. Inst., P. Health,
Chief Sanitary Inspector.

SANITARY INSPECTOR'S REPORT.

Town Hall,
Torquay,
February, 1914.

To His Worship the Mayor, and to the Aldermen and Councillors of the Borough of Torquay.

Gentlemen,

I beg to present this my Sixteenth Annual Report to the Council for year ending December 31st, 1913, in connection with the Sanitary Work carried out in that portion of the Borough under my direct supervision, viz., the Wards of Torwood, Strand, Upton, and Ellacombe.

One hundred and sixty-five houses and premises have been visited and examined under the following heads:—On complaint; after sickness; for Sanitary Certificates; and, under the Housing Act.

In connection with this work, 185 notices were served. Of these, 176 were of a preliminary nature, 6 statutory, and 3 closing orders. An additional 40 notices were served on owners and tenants for entry under the provisions of the Housing and Town Planning Act of 1909. 129 smoke and 52 hydraulic tests were applied to drains, and 159 re-inspections made.

Magisterial proceedings were taken in one instance and a conviction obtained.

The following table will shew the details of work above mentioned which were carried out:—

New system of drains laid to houses and other premises	33
Defected drains to houses and other premises repaired	16
Choked drains cleared	10
Intercepting traps with fresh air inlets provided to drains	26
Inspection chambers to drains provided	65

Old masonry traps abolished	9
Old iron traps removed and stoneware gullies fixed	36
Drains ventilated at head of system	21
Soil-pipes fixed outside buildings, and ventilated	16
New sanitary conveniences with water supply fixed	15
W.C.'s provided with water supply and flush cistern	7
New w.c. basins fixed in lieu of defective ones	20
Waste-pipes, from baths, lavatories, and troughs, trapped	49
Glazed stoneware troughs provided	8
Water supply laid on direct from main in lieu of storage tanks	9
Cisterns cleansed and repaired	3
Galvanized-iron bins for house refuse provided	3
Walls and ceilings of living and bed rooms, landings, staircases, and passages cleansed and limewashed	11
Additional means of ventilation to rooms provided	2
Roofs, chimneys and spouting of houses repaired	13
External walls of houses repaired	3
Defected yards re-paved in cement concrete	20
Floors of wash-houses and passages repaired	6
Houses closed aa unfit for habitation	2
Rooms disinfected after infectious and other diseases	66
Wards and class rooms disinfected after infectious disease	10
Walls and ceilings of workrooms and workplaces cleansed and limewashed	18
Nuisances from the keeping of fowls and animals abated	14
Nuisances from stables and manure pits abated	17
Nuisances from offensive accumulation abated	15
Overcrowding cases abated	8
Other matters	23

Complaints.

One-hundred and two houses and premises have been visited on receipt of complaint, and, in course of investigations made, 20 tests were applied to drains.

One-hundred and twenty-six notices were served to abate the nuisances found, of these, 117 were of a preliminary nature. 6 statutory, and 3 closing orders.

In connection with the notices served, 101 re-visits of inspection were made to the premises while work was in progress, and 20 tests were applied to drainage.

Magisterial proceedings were taken in one instance, defendant being convicted and fined 10s., including costs, for nuisance from stable premises.

Sanitary Certificates.

Acting on application made by the owners or occupiers of houses, to obtain the Council's Sanitary Certificate, 23 houses were examined and reported upon, and on completion of such work as was found necessary to comply with the Council's special requirements, certificates were granted in 19 instances; also certificates were granted in two other instances for houses examined at the close of the year 1912.

In each case the testing fee of 10s. was paid—a total of £11 10s.

In connection with this work, 16 of the houses were entirely re-drained; 64 smoke and 52 hydraulic tests were applied; and 47 visits of inspection paid while work was in progress.

Housing and Town Planning Act, 1909.

Under this Act, special inspections have been made during the year of 26 houses situated in Pimlico.

In consequence of the conditions in which many of the houses were found, the matter was reported to the Sanitary Committee, who appointed a Sub Committee to visit the houses with me, and they subsequently reported to the full Committee, that, owing to the condition and difficulty in putting many houses into a habitable condition, they were of opinion that the Committee should seriously consider the advisability of dealing with the locality as an unhealthy area; to this end the matter was referred to a Joint Committee, when the Borough Surveyor was instructed to prepare plans of the area for further consideration, Until the deliberations of the Committee are completed the usual notices have therefore not been served.

Further inspections were also made of other houses in Upton and Ellacombe Wards, and, as a result, 3 Closing Orders were made: one of these was determined after the house had been put in a habitable condition by being thoroughly repaired inside and out, and re-drained.

Some 40 notices were served on Owners and Occupiers for entry under the provisions of this Act.

Infectious Diseases, Etc.

During the year, work has been carried out in connection with the following 75 cases of infectious and other diseases :—

Diphtheria 29	Throat illness 4
Scarlet Fever 21	Influenza 1
Phthisis 12	Enteric 7

Other causes 1

Sixty-six rooms were disinfected by fumigation, and 5 class-rooms at two elementary schools, and 5 wards at an Institution for Children were disinfected by spraying with Formalin.

As the result of investigations made in connection with these cases at the various houses, notices were served in 14 instances for the following matters :—

Defective drainage	8
Dirty premises	5
Foul drinking-water cistern	3
Defective ventilator to W.C.	1
Defective external walls and roof	1
Fowls kept in dirty and offensive condition ..	1
Offensive accumulation..	1

Summer Diarrhoea.

During the summer months, rapid inspections were made of yards and back lanes at rear of houses in the Upton and Ellacombe districts, with a view to detecting accumulations of offensive matters, the object being to get rid of those substances likely to be productive of illness. In only 10 instances was it found necessary to serve notices for the following :—

Accumulation of offensive refuse	2
Accumulation of manure	1
Dirty yards	2
Nuisance from the keeping of fowls	5

Dairies, Cowsheds, and Milkshops.

The half-yearly inspection of 40 dairies and milkshops within my district has been carried out during the month of May and again in November.

These premises have, generally speaking, been kept in a clean and satisfactory condition, and, limewashing, where necessary, has been carried out at once after verbal notice.

There is also a very large quantity of milk supplied to Torquay from farms outside the Borough, and the dairies and cowsheds on 34 of these farms situate in the following districts :—

Wrangaton	Paignton	Aller
Brent	Marldon	Kingskerswell
Totnes	Dainton	Abbotskerswell

have, as in former years, been visited and inspected half-yearly, and the general condition and cleanliness was found to be well maintained.

Bakehouses.

During the year, inspections have been made of the 15 premises on the register ; limewashing and cleansing has been well carried out.

Seven notices were given, for matters found to require attention, and these were complied with.

Factory and Workshops.

Inspections have been made during the year of premises where the following work is carried on :—

Number.	Description of Trade.	Number of rooms or workplaces.
42	Laundries	90
23	Tailors	30
15	Bakers and Confectioners	15
1	Marble Mason	1
1	Tripe Boiler	2
5	Marine Stores and Rag Sorters	8
87		146

Sixteen notices were given for the following matters :—

10	..	..	Limewashing and cleansing
1	..	..	Defective floor
1	..	..	Dirty floors
1	..	..	Defective roof
1	..	..	Choked drain
1	..	..	Overcrowding
1	..	..	Offensive accumulation

Elementary Schools.

The six undermentioned schools :—

Upton C.E.	Ellacombe C.E.	Torwood C.E.
St. James' C.E.	St. John's C.E.	Torquay National

were visited on 48 occasions, and the sanitary arrangements examined and found to be clean and in working order : and limewashing was also periodically carried out.

In only two instances were matters found requiring attention, and these were promptly rectified on notice being given.

Public Conveniences.

Visits of inspection have, from time to time, been made during the year of these places, situate in the Torwood, Strand, Upton, and Ellacombe Wards, and, generally speaking, they were found in a satisfactory condition.

Common Lodging-Houses.

Five registered houses have come under my supervision during the year ; four of these being situate in Pimlico, and the other in Braddon Street.

The registered total accommodation is for 79 persons ; three of the houses being for men only.

Thirty-one visits of inspection have been made from time to time to these premises, and, in 8 instances it was found necessary to serve notices, 3 of these being on the owners of the

property, and 5 on the keepers of the houses concerned, for the undermentioned matters, all of which were rectified :—

Dirty premises	2
Defective W.C.'s	2
Defective spouting	1
Overcrowding	1
Occupation of unregistered room	1
Filthy bedding	1

Marine Stores, Etc.

Four such premises are on the register, and these have been visited and inspected from time to time, and taking into consideration the nature of the trade carried on, they have been kept in a fairly satisfactory condition.

In several instances it was found necessary to give instructions for the removal of accumulations of rags and bones, and for limewashing and cleansing.

In one instance, it was found necessary to serve a statutory notice to enforce compliance with certain requirements.

Tripe Boiling.

The only premises in the Borough where this trade is carried on is situate in Upton, and it has, on inspection, always been found to be kept in a satisfactory condition.

Port Sanitary Inspection.

The details of work carried out under this head will be found on the accompanying Special Report.

Office work has, during the year, demanded a considerable amount of time, for the purpose of keeping the necessary books and records of work, and in correspondence.

I am, Mr. Mayor and Gentlemen,

Yours obediently,

WILLIAM B. WATSON

Cert. Royal, San

Sanitary Inspector.

SANITARY INSPECTOR'S REPORT.

Town Hall,

Torquay,

February, 1914.

PORT SANITARY INSPECTION.

To His Worship the Mayor, and to the Aldermen and Councillors of the Borough of Torquay.

Gentlemen,

I have pleasure in presenting this, my Fifth Annual Report, giving details of work carried out during the year ending December 31st, 1913, in connection with my duties as Port Sanitary Inspector for the Borough.

As far as possible, the inspection of vessels entering this Port, is carried out as a matter of routine.

During the year, some 84 vessels of various classes have been boarded and inspected. Of these, 18 were foreign, viz :— 13 French, 3 Norwegian, 2 Russian.

In considering these figures it is necessary to bear in mind that many of the vessels trade here at regular intervals, and it is only considered necessary to examine them periodically ; there are also a considerable number of high-class steam-yachts using the port during the summer, and these are not likely to be kept in any but a Sanitary condition.

SUMMARY FOR THE YEAR 1913.

Number of vessels inspected	British 66 Foreign 18—Total 84
Number of crew carried	853
.. passengers carried	343
.. passengers landed	297
.. vessels on which defects were found	8
,, vessels with general cargo and passengers	19
,, ,, ,, cargo of coals	33
,, ,, ,, ,, ,, vegetables (foreign)	12
.. ,, ,, ,, ,, cement	9
,, ,, ,, ,, ,, timber (foreign)	5
,, ,, ,, .. slates (foreign)	3
,, ... sand	3

LIST OF SANITARY DEFECTS.

Notices for dirty sanitary conveniences	4
,, dirty crew quarters	1
,, foul and offensive fishing boats	3

In each instance the notices for the above matters were given to the Master or Mate, and were rectified.

I am glad to be able to report that during the year, no case of an infectious nature, or other sickness, occurred.

I am, Mr. Mayor and Gentlemen,

Yours obediently,

W. B. WATSON,

Cert. R. San. Inst., Inspector to Riparian Sanitary Authority.

SANITARY INSPECTOR'S REPORT.

Town Hall,

St. Mary-Church,

March 9th, 1914.

To His Worship the Mayor, Aldermen, and Councillors of the Borough of Torquay.

Gentlemen,

I have the honour of presenting to you my Fifth Annual Report for the year ending December 31st, 1913, in connection with the St. Mary-Church and Babbacombe Wards, and the remainder of the Borough so far as the inspection of meat and foods are concerned.

As in previous years the routine work has received the usual amount of attention, frequent inspections being made of the workshops, bakehouses and all places whereon food is prepared and careful attention paid to the foodstuffs, and also to the cleansing of the premises and utensils.

The number of houses inspected under the Housing, Town Planning Act, and in connection with infectious diseases, shows an increase on the past three years, there being a fair amount of lasting and substantial work carried out in the nature of drainage, paving and structural work.

It will be observed that every year the work of the department increases owing either from new legislation, increase in population or demands made by the public for better sanitary surroundings. The extra work placed on the Sanitary Authorities during the past year being the Tuberculosis Animals Order and the Epizootic Abortion Order.

Infectious Diseases.

(TABLES A and B).

There has been an increase in the number of premises dealt with where infectious diseases have occurred. The increase being shown in the cases of Diphtheria and Phthisis.

TABLE A.

1912 Rooms.	Disease.	1913 Rooms.	1912 Rooms.	Disease.	1913 Rooms.
7	Scarlet Fever ..	6	—	Measles	—
4	Diphtheria ..	56	—	Cancer	1
15	Phthisis ..	23	—	Typhoid Fever ..	1

The sum of 10/- was received for disinfecting rooms after cases of Phthisis.

TABLE B.

Premises Visited and Improvements Made.

Houses inspected	52
Houses visited	28
Dirty rooms limewashed or cleansed	30
Rooms disinfected	87
Defective floors repaired	
Water supply laid to tap over sink	
Defective yards paved	
Rooms lighted or ventilated	11
R.W.P.'s and gutters repaired	6
Nuisances from keeping fowls and animals	—
Ashbins provided for house refuse	
Roofs repaired	

Drains Tested.

Smoke	
Water	—
New sets of house drains laid	—
Defective house drains repaired	—
Old "Masons" traps abolished	—
Intercepting traps with fresh air inlets fixed	—
Inspection chambers to drains fixed	—
Drains ventilated at head of system	—

DRAINS TESTED—*continued.*

New water-closets with water supply fixed	—
New gullies fixed	—
Choked drains cleared	2
Defective W.C. cisterns repaired or provided ..	3
W.C.'s repaired and cleaned	1
Glazed stoneware sinks fixed	5
Miscellaneous	8
Re-visits in connection with this work	33
Preliminary notices	13
Letters written	7
Verbal notices	—
Legal notices	—

INSPECTIONS MADE UNDER THE HOUSING, TOWN PLANNING ACT, 1909.

(TABLE C.)

Under the provisions of the above Act fifty-nine houses have been inspected, the premises in question being situated mainly in the Victoria Park and Hele areas and a few in St. Mary-Church proper, the two latter areas being dealt with owing to an outbreak of Diphtheria.

In most of the houses inspected various defects were discovered, the principal faults being defective drainage, want of sufficient ventilation to bed and living rooms, defective gutters, down spouts, yard paving, and want of suitable ash accommodation.

Very little trouble has been experienced with the various owners in having the necessary repairs carried out, but it has been found advisable in several instances to give the owners a fair amount of time to do the work, owing to financial embarrassments. This accounts for a number of outstanding notices, viz.: about thirty. At the time of writing the work is in hand in twenty-one cases, in six instances notices have not yet been served, and in one case nothing has yet been done in the matter. In a number of instances the work has been completed, but cannot be included in these returns, the work not being finished till early in 1914.

Since your Council adopted a Bye-law dealing with ash accommodation less trouble has been experienced in getting

owners to supply the more sanitary galvanised ash-bin. These receptacles are appreciated by the tenants and so far as I can ascertain they are well looked after, but owners make the unfortunate mistake of buying the cheapest obtainable, which will mean replacing after a few years.

The house that was closed during 1912 on representations being made by the owner, was put in a thorough sanitary condition early in the year, so the Council withdrew the Order.

(TABLE C.)

PREMISES VISITED AND IMPROVEMENTS MADE.

Houses inspected or visited	137
Dirty rooms limewashed and cleansed	14
Cases of overcrowding abated	—
Defective floors repaired	8
Water supply laid to tap over sink	—
Defective yards re-paved or repaired	7
Bed and living rooms ventilated	21
R.W.P.'s and gutters repaired	16
Nuisances from keeping fowls and animals	1
Ashbins provided for house refuse	2
Roofs repaired	11

DRAINS TESTED.

Smoke	25
Water	3
New sets of house drains laid	2
Defective house drains repaired	4
Intercepting traps with fresh air inlets fixed	3
Old " Mason's " traps abolished	—
Inspection chambers to drains built	3
Drains ventilated at head of system	3
New sanitary conveniences, with water supply fixed ..	5
Soil pipes fixed outside buildings and ventilated ..	—
Iron and brick traps removed, and earthenware gullies fixed	7
Choked drains cleared	5
Defective W.C. cisterns repaired, or new provided ..	7
W.C.'s repaired and cleaned	5
Glazed sinks fixed	5
Cesspools abolished	—

MISCELLANEOUS.

Offensive accumulations removed	8
Nuisances from stables and manure pits abated ..	—
Waste of water reported	—
Miscellaneous	36
Re-visits in connection with above works	114
Legal notices served	29
Preliminary notices	65
Letters and communications on the business of the Department	359
Visits made to slaughter-houses	—

COMPLAINTS.

(TABLE D.)

The number of complaints received are well up to the average. These no doubt would be considerably higher, but the inspections made in connection with infectious diseases, etc., thus leading to nuisances being discovered at an early date or before persons aggrieved have time to complain.

The complaints were of the usual nature and are set out in the table appended. Of course in many instances no nuisance was found to exist, the nuisance having been abated before the inspection was made, or the complaint found to have been lodged as the result of spite and quarrels.

TABLE D.

PREMISES VISITED AND IMPROVEMENTS MADE.

Houses inspected	24
Houses visited	87
Dirty premises limewashed and cleansed	2
Rooms disinfected on request	—
Cases of overcrowding abated	—
Defective floors repaired	4
Water supply laid direct from main to tap over sink ..	1
Defective yards re-paved	3
Lighted and ventilated rooms	1
R.W.P.'s and gutters repaired	4
Nuisances from keeping fowls and animals	1
Ashbins provided for house refuse	35
Roofs repaired	1

Drains Tested.

Smoke	21
Water	5
New sets of house drains laid	3
Defective house drains repaired	4
Old masonry drains found and abolished	—
Intercepting traps with fresh air inlets fixed	1
Old "Mason's" traps abolished	—
Inspection chamber to drains built	4
Drains ventilated at head of system	3
New sanitary conveniences with water supply fixed	4
Soil pipes fixed outside buildings and ventilated	2
Iron and brick traps removed and earthenware gullies fixed	7
Waste pipes from baths, lavatories, and sinks trapped	1
Choked drains cleared	1
Defective W.C. cisterns repaired or new provided	—
W.C.'s repaired and cleaned	7
Cesspools cleaned	—
Glazed sinks fixed	1

Miscellaneous.

Offensive accumulations removed	15
Nuisances from stables and manure pits abated	3
Miscellaneous	19
Re-visits in connection with above work	101
Legal notices	5
Preliminary notices served	20
Letters and communications in connection with this work	31
Verbal notices	7
Written complaints	23
Verbal complaints	61

Sanitary Certificates.

(TABLE E.)

The drains and sanitary fittings of nine houses were tested and reports made respecting same. This is two less than during 1912.

Of the nine premises reported upon, the drains of two required reconstruction throughout; in six cases minor defects were found, such as a few slightly defective joints on the drains or soil pipes, or the drains improperly or insufficiently ventilated.

In one instance the drains were found satisfactory and the fittings, etc., of modern construction.

In all the above cases the fee of 10/- was paid, making a total of £4 10s.

TABLE E.

Premises Visited and Improvements Made.

Houses inspected	9
Dirty rooms limewashed and cleansed	6
Defective floors repaired	
Water supply laid direct from main to tap over sink ..	
Defective yards re-paved	4
R.W.P.'s and gutters repaired	4
Ashbins provided for house refuse	1
Rooms ventilated	3

Drains Tested.

Smoke	48
Water	5
New sets of house drains laid	1
Defective house drains repaired	7
Intercepting traps with fresh air inlets	2
Old "Masons" traps abolished	1
Inspection chamber to drains built	3
Drains ventilated at head of system	1
New sanitary conveniences with water supply fixed ..	3
Soil pipes fixed outside buildings and ventilated ..	2
Iron and brick traps removed and earthenware gullies fixed	5
Waste pipes from baths, lavatories, and sinks trapped ..	1
Defective W.C. cisterns repaired, or new provided ..	—
W.C.'s repaired and cleaned	1
Glazed sinks fixed	2
Lavatory basins fixed	1
Slop sinks constructed as water closets	—
Choked drains cleared	—

Miscellaneous.

Miscellaneous	9
Re-visits in connection with above work . ..	21
Letters and communications in connection with this work	24

Dairies and Cowsheds.

There are 21 Dairies and 17 Cowsheds in the district; these have been inspected at least twice during the year.

Very little change has occurred in connection with these places, one or two milk sellers having given up and two or three commenced business, but the number of cowkeepers are the same as last year.

We have still with us those who appear to take no pride or interest in their trade, but seem to consider that any conditions, no matter how foul or insanitary, are good enough for cattle, and so long as the milk is strained and the front shop kept clean, their duty to their customers has been carried out.

It seems strange that so few cowkeepers realize the importance of grooming the cows and washing the teats before milking, and of cooling the milk immediately after drawing it from the cows before placing it in the churns. I suppose not 5 % of the local cowkeepers carry out these simple precautions, yet by doing so, their milk would keep longer and sweeter, and thus save them a considerable amount of worry, especially during the hot summer weather.

One cowkeeper, who milks on the average 36 cows, had them tested with the tuberculin test, with a negative result in each case. Apart from anything else he has the satisfaction of knowing he possesses a herd of cattle free from tuberculosis. Except for this case and the one mentioned under the Contagious Diseases Animals Act, I am not aware that other cowkeepers locally have availed themselves of the advantages of this test.

One cowkeeper was cautioned by the Sanitary Committee under the Dairies, Cowsheds and Milkshops Order, owing to the filthy condition of the cowsheds and surroundings and as regards the position where vessels and milk was placed previous to removal to the shop.

As in former years, I accompanied the Medical Officer of Health to the different dairy farms situated outside the Borough where milk is obtained by the dairymen trading in the Borough. In a few instances the want of lime-washing and the removal of manure from the yards had to be pointed out to the farmer.

Meat and Food Inspection.

It will be observed that the inspection of food has again occupied a considerable amount of time and labour; the number of visits to places where foods are prepared are well above the average and the number of carcases examined and the quantity of diseased or unsound food destroyed again shows an increase.

There are, approximately, seventy-two butchers' shops, sixty fruiterers shops, about ten shops where cooked or cured meat is sold, eight slaughter-houses, one market, one railway siding, and the Fish quay, in the Borough. Eight butchers from beyond the Borough boundary, and about ten local butchers hawk meat round the town from carts.

Visits are paid to the majority of the butchers' shops two or three times a week, generally on Tuesdays, Thursdays and Fridays, and the contents of butchers' carts coming from the outlying districts kept under observation.

It was found necessary to undertake one prosecution during the year. The circumstances in connection with the removal of organs and carcases from a slaughter house were such that the Sanitary Committee felt that they had no alternative but to take the case before the magistrates. The case was duly heard before the Justices, who considered the case proved, and fined the defendants. The defendants subsequently appealed to Quarter Sessions, when the appeal was allowed, but without costs.

During the early part of the year it was found that certain butchers began the practice of removing the glands from the heads or necks of pigs slaughtered at the Public Abbatoir, apparently with the object of hiding or removing the presence of disease. Such action pointed to an attempt to prevent inspection, being analagous to the "stripping" of a carcase. Your Committee rightly took a serious view of the matter and cautioned the offenders with a view of further action being taken if the practice continued. This had the desired effect, and it is very rare now to find the glands have been removed.

Apart from these cases very little trouble has been experienced; in fact, I think I can safely say that the master-

butchers and other tradesmen give every facility for inspection and endeavour to co-operate with your officers and frequently seek their advice on matters connected with their trades; it is only among a very few who seem under the impression they are benefactors to the public and tradesmen generally if they can find a loophole to retard or prevent inspection or destruction of diseased food in the ordinary way.

During the year, 83 carcases or parts of carcases affected with tuberculosis were found, necessitating the destruction of 118 organs or parts of carcases, being a decrease of 10 compared with last year, the decrease being most noticable in the case of pigs. The explanation for this seems to be. that greater care is now taken in the rearing of the animals, limewash and disinfectant being more frequently used and advantage taken of light and ventilation; especially is this the case where several cases of tuberculosis have occurred among animals from certain stys. In these cases the owners were advised to limewash and disinfect, and it is only in one or two instances that cases have recurred, and in these cases enquiries have shown that the pigs were either from the infected litter, or the disinfectant had not been efficiently applied.

Greater care is also taken by dealers sending carcases and organs into the town; in fact, it is admitted that anything of a doubtful nature is rigidly excluded from Torquay and sent to other districts where periodical inspection is not carried out.

Your Council will no doubt recollect that during the years 1912 and also early in 1913 several cases were reported to you of the class of meat sent in by a butcher slaughtering outside the Borough, but owing to the question of "possession" at the time of exposure and seizure, it was thought that proceedings could not be successfully undertaken against the man. However, during the latter end of last year, owing mainly to representations being made by your Council to an adjoining Council of the class of animals dealt in by this man, he was kept under supervision, with the result that he was prosecuted for being in possession of diseased meat, and heavily fined; this has had a very salutary effect, as there has been no need to complain since of the quality supplied.

No cases of generalized tuberculosis in animals has occurred during the year under review, and in the case of pigs the

disease was usually found in either the sub-maxilliary or mesenteric glands. Why these glands only should be affected and not other glands and organs is a point which I have been unable to clear up; the only conclusion I can arrive at is, the animal in some way—probably from infected stys or fellow subjects—contract the disease, but owing to the mildness of the local climate the animals maintain a fairly healthy condition and is able to prevent the disease developing and gaining access to the main lymphatic stream.

During the past year we have made a practice of making a microscopical examination of the superficial glands of tuberculous carcases as well as sections and smears of diseased or suspected diseased organs or glands or where the disease is of a doubtful nature. Although this means a good deal of extra work, as most of the investigations are made during the evening, it is time well spent, both from the educational point of view and to the fact that it is essential to know as soon as possible the nature and extent of the disease.

Although nothing startling has been discovered the information so obtained would be useful should action arise at any time in respect to seizure and condemnation of a carcase or organ, and the material collected is most useful for future reference, we having some hundreds of smears and sections to refer to.

If only the neck glands show microscopical evidence of the disease it is the practice to remove and destroy the head, but before concluding that the carcase is free from disease we always, in addition to this examination of the superficial glands, obtain small sections of same for the purpose of microscopical examination as stated above.

Sixty-eight Magistrates Orders for condemnation of food were obtained involving 95 different articles. This is an increase of just over 20. This increase is accounted for by the fact that although a number of articles are left in the slaughterhouses for inspection we consider it a safeguard to carry out the whole of the legal formula irrespective of the nature of the article dealt with. This eventually proved justified in view of an attempt made to question condemnation, etc.

Of course, this means a lot of unnecessary and practically useless labour, as in the vast majority of cases the butcher is

quite willing to surrender when he is told the article is diseased, so the ratepayer has only to thank a few individuals for any extra expense entailed through carrying out this important duty by increasing our work in carrying diseased articles before a magistrate for the purpose of condemnation.

Fifty separate articles were voluntarily surrendered, 591 being surrendered on request after inspection and 95 seized in the usual way.

On reference to the Tables it will be observed that 736 organs, or parts of carcases, were destroyed on account of disease or unsoundness, rendering them unfit for food; 13¼ carcases were also surrendered or seized, making a total of 760 separate articles.

Table F gives the nature of the diseases, necessitating the destruction of the various organs, or parts of carcases, etc.

Five specimens have been forwarded to either the Clinical Research Association or the Runcorn Laboratories for the purpose of confirming the diagnosis of the disease. These were sections of sheeps' livers, pigs' glands, and cats' kidney.

The diseases discovered during the year have been of the usual type, as will be seen by Table F. Three cases of angioma in cows' livers and a case of tuberculosis in a calf being the only things out of the common.

Frequent visits are made to the rooms and the utensils used in the process of sausage making and in the preparation of cured and cooked meats inspected. The necessity of hygienic measures being observed in cases where food is prepared is frequently pointed out. The worst offender in this matter I am pleased to say has left the town; in the other case the prosecution before referred to, led to a better state of affairs generally.

The railway siding is frequently visited, especially during the summer, for the purpose of examining frozen and chilled meat consigned to the various frozen meat firms. I have again to record that every assistance and courtesy is rendered by the representatives of the various firms when making the inspections, and in the event of carcases or organs, etc., being found affected

with bone taint, bruised or unsoundness, I am immediately informed of the fact, and if on inspection the article is in my opinion unfit for food, it is at once surrendered when a certificate is given to that effect. During the year, 16 parcels or articles were surrendered, making a total weight of 658 lbs. Two surrender notes were signed and 16 certificates of condemnation given.

During the spring, summer and autumn, frequent visits were paid to the Fish Quay during the early morning, but nothing was found calling for special notice. No complaint has been received during the year in respect to the quality of fish sold, but this may be accounted for owing to the scarcity of fish in general, which so found a ready sale. The only fish that were in any way plentiful were sprats and mackerel, and owing to the abundance of these on some days the supply exceeded the demand, with the result that some hundred weight had to be disposed of for manure.

Weekly visits are paid to the Market Hall and the contents of Hawkers stalls inspected, especially during Saturday evening. In only a few instances has it been found necessary to point out to tradesmen that fruit or vegetables exposed for sale were unfit for food, or to have removed rabbits' livers affected with Coccidiosis.

In the early part of the year an effort was made to obtain a lease of the Public Abbatoir, but after lengthy negotiations with the Market Company, the matter had to drop, as terms could not be arranged. This is much to be regretted from many points of view, but more from the question of supervision of slaughtering and general control of the premises.

When looking up this matter and the question of the private slaughter-houses in particular, I discovered on going through the reports of the old St. Mary-Church Local Board, that three slaughter-houses, which were assumed were "Registered" premises, were really "Licensed" slaughter-houses, they having been erected or used as slaughter-houses after the formation of the aforesaid Local Board. This means we have only two "Registered" slaughter-houses, one which was erected soon after the passing of the Towns Improvement Clauses Act, 1847, and the Public Abbatoir, which was erected under a private Act, but is still subject to registration, as the Market Act was not obtained till the year 1864.

We have then in the Borough two "Registered" and six "Licensed" slaughter-houses.

Gooseberry Mildew Order, 1912.

No case of Mildew has been discovered, but the usual inspections have been made and the fruit inspected, especially in the case of carts coming in from the adjoining districts.

Enquiries were made by two Government Inspectors, as to the steps we were taking in the matter of supervision and mode of dealing with any diseased fruit that might be discovered.

Contagious Diseases Animals Act and Tuberculosis Order, 1912.

So as to be able to deal with any cases notified under the above named Act and Order, your Council appointed me an Inspector under the Contagious Diseases Animals Act, with authority to act in the event of tuberculosis being discovered among milch cows.

During the year one case of suspected (indurated) udder tuberculosis was reported from a farm at Barton. Your Veterinary Inspector made an examination of the cattle on the farm, viz., 16 cows in milk, and submitted them to the tuberculin test, with a negative result in each case.

One case of suspected Epizootic Abortion was also notified; this was also at the above farm. From enquiries made and examination undertaken by your Veterinary Surgeon, the facts obtained pointed to an ordinary case of abortion and not such as contemplated by the Order of 1913.

No cases of Swine Fever, Anthrax, or other notifiable animal disease has been brought to our notice during the year.

TABLE F.

Diseased or Unsound Food Destroyed.

Organs.	Diseases.											
	Tuberculosis.	Flukes.	Cirrhosis.	Abscess.	Cysts and Water Bladders	Strongyli.	Inflammation.	Pleurisy.	Injury.	Actinomycosis.	Unsound, &c.	Totals.
Bullocks: Lungs ..	—	—	—	—	1	—	—	—	—	—	—	1
Livers ..	—	14	12	1	—	—	—	—	—	—	—	27
Tongues ..	—	—	—	—	—	—	—	—	—	—	10	10
Heads.. ..	—	—	—	—	—	—	—	—	—	—	—	—
Cows: Lungs ..	—	—	—	3	3	—	1	—	—	—	—	7
Livers.. ..	1	25	23	4	—	—	—	—	—	—	3	56
Heads.. ..	—	—	—	—	—	—	—	—	—	—	—	—
Tongues ..	—	—	—	—	—	—	—	—	—	—	—	—
Heifers: Lungs.. ..	1	—	1	—	—	2	1	—	—	—	—	5
Livers.. ..	1	4	5	—	—	—	—	—	—	—	—	10
Tongues ..	—	—	—	—	—	—	—	—	—	—	—	—
Heads.. ..	—	—	—	—	—	—	—	—	—	—	—	—
Sheep Lungs.. ..	—	—	—	4	1	45	3	—	—	—	—	53
Livers.. ..	—	75	—	180	76	—	1	—	—	—	—	332
Pigs: Lungs.. ..	4	—	4	1	4	12	25	—	—	—	—	50
Livers.. ..	5	—	—	—	1	—	2	—	—	—	—	8
Heads.. ..	51	—	—	1	—	—	—	—	—	—	—	52
Other Organs:												
Mesenteries ..	19	—	—	—	—	—	3	—	—	—	—	22
Spleens ..	5	—	—	—	—	—	1	—	—	—	1	7
Stomachs ..	2	—	—	—	—	—	1	—	—	—	1	4
Miscellaneous	11	—	—	3	—	—	9	—	7	—	35	65
Fowls ..	16	—	—	—	—	—	—	—	—	—	—	16
Other Foods	8	—	—	—	—	—	—	—	—	—	3	11
Totals ..	124	118	45	197	86	59	47	—	7	—	53	733

TABLE G.

Dressed Carcases Examined.

1912.		1913.
130	Bullocks	340
132	Cows	304
84	Heifers	229
3,797	Sheep	6,863
67	Lambs	211
1,068	Pigs	1,494
431	Calves	422
5,709	Total ..	9,863

TABLE H.

Diseased or Unsound Food Destroyed.

1912.					1913.			
tons.	cwts.	qrs.	lbs.		tons.	cwts.	qrs.	lbs
	7	0	19¼	Voluntary surrendered (approximate weight)	1	1	1	7
	18	0	3¼	Surrendered after Inspection (approximate weight) ..		19	2	16
	13	1	18½	Seized		5	3	18
1	18	2	13		2	6	3	13

TABLE I.

Carcases Destroyed.

1912.		1913.	
1 Cow ..	Tuberculosis	1 Sheep ..	Suffocation
1 Sheep ..	Abortion	2 Lambs ..	,,
1 Lamb ..	Suffocation	5½ Pigs ..	Tuberculosis
2 Pigs ..	Tuberculosis	1 Pig ..	Nephritis
1 Heifer ..	,,	¼ Pig ..	Abscess
		2 Cows ..	Abortion
		2 Calves ..	Suffocation

TABLE J.

1912.		1913.
840	Slaughter-houses .. .. : ..	832
1,046	Butchers' Shops	1,822
297	Butchers' Carts	346
25	Fish Quay	25
17	Railway Siding	20
35	Market	59
246	Other shops	832
2,506		3,936

TABLE K.

NUMBER OF TUBERCULOSIS ANIMALS OR PARTS AND WHERE FOUND.

	Slaughter-houses.	Shops.	Carts.	Total.
Bullocks	—	—	—	—
Cows	1	—	—	1
Heifers	—	—	—	—
Pigs	50	28	3	81
Calves	1	—	—	1
				83

TABLE L.

PERCENTAGE OF DISEASED ANIMALS. (TUBERCULOSIS.)

Cows	2 in 304 ..	·658 per cent.
Pigs	64 in 1,494 ..	4·29 ,,
Calves	1 in 422 ..	·023 ,,
Total ..	67 in 2,220 ..	3·01 per cent.

TABLE M.

NUMBER OF CARCASES EXAMINED IN THE DIFFERENT SLAUGHTER-HOUSES IN THE BOROUGH.

No.	Bullocks.	Cows.	Heifers.	Sheep.	Pigs.	Calves.	Lambs.	Total.
1.	7	3	2	24	17	6	—	59
2.	17	17	3	318	65	23	21	464
3.	1	1	—	86	8	—	1	97
4.	2	42	8	128	82	7	1	270
5.	1	3	3	123	1	—	5	136
6.	10	4	23	197	—	—	29	263
Abattoir	38	14	10	1611	442	360	169	2644
8.	—	—	—	324	—	—	4	328
	76	84	49	2811	615	396	230	4261

TABLE N.

TOTAL NUMBER OF CARCASES EXAMINED IN DIFFERENT SLAUGHTER-HOUSES DURING THE YEAR 1913.

Slaughter-Houses	3707
Shops	6156
	9863

Workshops, Etc.

As time and opportunity admits, inspections are made of the various workshops and factories in the district, but owing to the general increase of work, such as infectious diseases, inspections under the Housing and Town Planning Act, complaints and the calls on my time in connection with food inspections, the whole of the workshops could not be visited, but the most important, such as bakehouses, dressmakers, tailors, etc., were visited at least once during the year.

Under Section 107 of the Factory and Workshop Act, 1901, persons employing outworkers in certain trades must furnish the Sanitary Authority with the names and addresses of all outworkers employed by them.

These lists should be furnished twice a year, viz: February and August.

The usual difficulty is experienced in obtaining these lists, practically the whole of the firms employing outworkers had to be written to, some several times, before these lists were furnished.

41 outworkers' names were received between February and March and 32 between August and November, who carry on work at 36 different premises. The majority have been visited and the premises and surroundings found clean and satisfactory.

The names and addresses of 8 outworkers have been forwarded to other Sanitary Authorities.

There are two underground bakehouses in my district.

The Factory Inspector has been notified of one unregistered workshop, and 3 notices of occupation were received from him.

One notice was received from the Factory Inspector; this related to want of closet accommodation.

TABLE P.

Improvements Made.

	Number of Defects Found.	Remedied.
Dirty workshops limewashed and cleansed ..	9	4
Cases of overcrowding abated	—	—
Defective floors repaired	1	3
Defective yards re-paved	1	1
R.W.P.'s and gutters and roofs repaired ..	—	—
Nuisances from keeping fowls and animals ..	—	—
Ashbins provided for house refuse	1	1
Lighted and ventilated workrooms	1	1

Drains Tested.

Smoke	1	1
New sets of house drains laid	1	1
Intercepting traps with fresh air inlets fixed ..	—	1
Insufficient sanitary conveniences	—	1
Inspection chambers to drains built	—	1
Defective W.C. cisterns repaired or new provided ..	—	2
Drains ventilated	—	1
W.C.'s repaired and cleaned	—	—
New sanitary conveniences with water supply fixed	—	1
Glazed sinks fixed	—	1
Earthenware gullies fixed	—	2

Miscellaneous.

W.C.'s not separate for sexes	—	—
Nuisances from stables and manure pits abated ..	—	—
Miscellaneous or other defects	—	1
Re-visits in connection with above work ..	—	2
Legal Notices served	1	—
Preliminary notices	2	—
Letters and communications on the business of the Department	17	—
Letters or Notices and Verbal Notices—		
Factories (including Factory Laundries) ..	1	—
Workshops (including Workshop Laundries) ..	4	—
Workplaces (other than Outworkers' premises) ..	—	—
Outworkers	65	—
Nuisances under the Public Health Acts—		
Want of cleanliness	8	8
Overcrowding	—	—

Miscellaneous—*continued.*

Other nuisances	4	4
* Sanitary accommodation — insufficient	1	1
* Sanitary accommodation — unsuitable or defective ..	—	—
* Sanitary accommodation — not separate for sexes ..	—	—

* The Public Health Act Amendment Act, 1890, is in force in the Borough.

TABLE Q.

Number Re-visited.	Description of Trade.	Number inspected.	No. of workrooms or workplaces.
8	Laundries	37	86
2	Dressmaker and Milliner	8	8
	,, ,, Outworkers ..		
	Corset Maker		
2	Tailor	4	4
4	,, Outworkers	4	4
2	Bootmaker	8	8
2	,, Outworkers	3	3
	Saddle and Harness Maker	1	2
	Sailmaker		
	Coachbuilder	1	1
	Wheelwright	1	1
	Shoeing Smith	1	2
	Upholsterer and Cabinet Maker ..	2	3
	Blind Maker		
	Umbrella and Trunk Maker		
	Picture Framer		
	Photographer	1	1
	Watchmaker and Jeweller	1	1
	Electro-plate Works		
	Printing Works	1	1
	Dye Works		
	Cycle Works or Repairers	1	1
	Plumber and Painter	4	5
	Builders, Decorators, and Carpenters ..	7	10
	Marble Mason	1	2
	Quarries	2	2
	Ironmonger and General Smith ..	1	1
17	Baker and Confectioner	17	20
1	Marine Store and Rag Sorter ..	1	1
	Forage	1	1
	Ærated Waters	2	3
2	Pickles and Jams	1	2
	Bottle Washing		
	Engineers	1	2
	Dust Destructor		
	Tentmakers		
	Bath-chair Makers		
	Knitting		
	Pottery	2	3
	Brewers		
	Wigs		
1	Basket Makers	1	1
41	Totals ..	115	179

TABLE R.

Total Number of Workshops and Factories on Register.

Description of Trade.	Number.
Laundries	54
Dressmaker and Milliner	10
,, ,, Outworkers	—
Corset Maker	—
Tailor	9
,, Outworkers	4
Bootmaker, including Outworker's workshops	19
Saddle and Harness Maker	2
Sailmaker	—
Coachbuilder	2
Wheelwright	1
Shoeing Smith	5
Upholsterer and Cabinet Maker	5
Blind Maker	—
Umbrella and Trunk Maker	2
Picture Framer	1
Photographer	2
Watchmaker and Jeweller	3
Electro-plate Works	—
Printing Works	3
Dye Works	—
Cycle Works or Repairers	2
Plumber and Painter	7
Builders, Decorators and Carpenters	9
Marble Mason	5
Quarries	5
Ironmonger and General Smith	2
Baker and Confectioner	17
Marine Store and Rag Sorter	1
Forage	1
Ærated Waters	3
Pickles and Jams	1
Bottlewashing	1
Engineers	1
Pottery	3
Brewers	1
Bath Chairs	—
Dust Destructor	—
Knitting	—
Basketmakers	1
Total	182

Miscellaneous.

The temporary closet accommodation on the Race-course (the same provisions being made as last year) was visited each day during the races, and were generally found satisfactory.

The Public Elementary Schools were regularly visited and inspections made of the closets and urinals. In one or two instances it was found necessary to call the attention of the caretaker to the dirty condition of the water closets, and in one instance it was found necessary to reconstruct the drains, closets and urinals owing to their defective and insanitary condition.

The public conveniences on Oddicombe Beach, Babbacombe Beach, Babbacombe Downs, Wellswood, and Manor Road, have been frequently visited, and have generally been found clean and satisfactory.

A total of 438 letters or postcards and about 200 notices were sent out and 612 letters, postcards, telephone calls, or other communications were received in connection with the work of the department during the year. This conveys some little idea of the increase in the clerical work that has taken place during the past few years, for between the years 1904 and 1908 a total of only 698 letters or postcards were written, or an average of 139·6 per annum.

A distance of two thousand four hundred and five miles has been cycled during the year.

Liquid disinfectant was supplied to between 400 and 500 persons during the year, the greatest quantity being supplied during the latter end of the summer at the time of the outbreak of Diphtheria.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

GEORGE EDWARD BODY,

Cert. Royal San. Inst. &c., Sanitary Inspector.

METEOROLOGICAL REPORT.

To the Worshipful the Mayor, Aldermen, and Councillors of the Borough of Torquay.

GENTLEMEN,

I beg to report that Meteorological readings have been continuously taken at the two stations under my charge twice daily throughout the year; in the morning at 9 a.m. (local time), and in the evening between 4 and 6 o'clock, according to the season.

The morning results have been posted each morning at the weather office and at several stations in the town. A telegram is now sent each morning to the Enquiry Offices of the Caledonian Railway at Glasgow and Edinburgh, giving the sunshine, and maximum temperature of the previous day, and some account of the weather, at the moment.

The evening report is telegraphed to the Meteorological Office, and is distributed by them to the principal news agencies, viz:—The Central News, the Press Association, and the Exchange and Telegraph Company, and separately to the following newspapers:—

LONDON.		PROVINCIAL.
Times	Chronicle	Aberdeen Free Press
Morning Post	Graphic	Dundee Courier
Express	News	Yorkshire Post
Standard	Morning Leader	Scotsman
Telegraph	Observer	Manchester Courier
Referee	Weekly Dispatch	Liverpool Courier
Sketch	Sporting Life	
New York Herald		

In this way a very wide publicity is obtained, and my only regret in this connection is that we have not had better weather to report upon.

The evening report is now transmitted to the "Western Morning News," and the "Western Daily Mercury," and is posted for exhibition the following morning to 24 stations and receiving offices of the Great Western Railway

Weekly reports have been furnished to the Meteorological Office, and some local papers, and separate and distinct press reports to the "Manchester Courier," and the "Financial News."

A full report on each day's weather is furnished monthly to the Meteorological Office, and less extended reports are posted in the town, and supplied to the "Torquay Directory," and other Western papers, and to the "Lancet"; a further and distinct report is sent monthly to the "Rainfall Organization."

When weather has called for special comment, research has been made, and the results posted at the office. It is no exaggeration to say that these notes have been read with interest by many thousands of visitors.

In the spring of the year, a letter was sent to the "Torquay Directory," by a gentleman staying in the town, interested in meteorological work, suggesting the provision by the Corporation of a barograph, to be placed in some conspicuous position for the information of the public. Following the publication of this letter, Sir Thos. Bazley, Bart., of Kilmorie, called upon me with the request that I would ask the Sanitary Committee to accept the very handsome instrument that is now in the entrance hall of the Pavilion.

The annual inspection of the stations was made by an official of the Meteorological Office in June.

I am, Gentleman,

Your obedient servant,

FREDERICK MARCH.

OBSERVATORY AND INSTRUMENTS.

The Observatory is organised and maintained by the Town Council, and is under the supervision of the Meteorological Office, London.

The several Barometers, Thermometers, and Rain Gauges have been verified at Kew Observatory, and are regularly examined by an Inspector on the Staff of the Meteorological Office. Readings are all corrected for instrumental errors.

The Hygrometrical Results are deduced from the daily morning readings of the Dry and Wet Bulb Thermometers by means of Glaisher's Tables.

The averages for Sunshine are the result of 14 years', for Temperature and Rainfall of 37 years', and for Pressure of 29 years' observations.

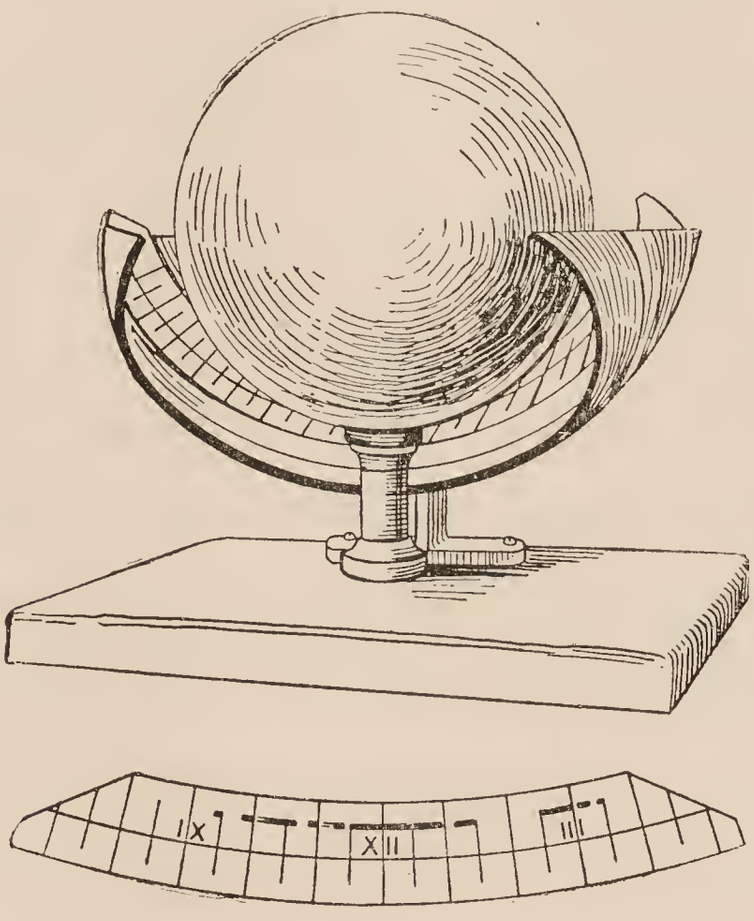
The following are the instruments and appliances in regular use, those marked with an asterisk being the property of the Torquay Natural History Society, and lent by them to the town:—

* The **Barometer** is a Fortin Standard, and is read twice daily, at 9 a.m. (local time) and at about 5 p.m. All readings are reduced to 32° F. and mean sea level, and are thus comparable with all readings similarly reduced.

* An **Aneroidograph**, by Richard Freres, gives in graphic manner the alternations of pressure.

Two double-louvred **Stevenson's Screens**, each containing **Dry** and **Wet Bulb**, and **Maximum** and **Minimum Thermometers.** The instruments are of standard make, and are so placed that the bulbs of the hygrometer are four feet above the level of the ground. One of these sets has been working throughout the year at Cary Green, where the published temperatures have been taken; the other in the Princess Gardens.

The **Rain Gauges** are of copper, by Casella, and of the Snowdon pattern. They are placed : one on Cary Green, one in the Princess Gardens, with the upper edges 12 inches above the level of the ground.



A third *__Stevenson's Screen__, also double-louvred, has been in position in the Princess Gardens, and has held a *__Thermograph__, or Self-recording Thermometer, and an __Ozonometer__.

The **Grass Minimum** is by Hicks, and is placed in the Princess Gardens an inch above the ground.

The **Sunshine Recorder** (see illustration above) is situated on the covered shelter at the southern end of the Pier deck, and is a Curtis' Improved Campbell-Stokes instrument, fitted with a $3\frac{1}{2}$-inch spherical lens of crown glass, working on the principle of the burning-glass

SHADE TEMPERATURES

Taken at 9 a.m. (Local Time).

1913.	Maximum *mean.*	Minimum *mean.*	Max. & Min. *mean.*	Difference from Average.	Range *mean.*	Highest.	Date.	Lowest.	Date.
	°	°	°	°	°	°		°	
Jan. ...	49·9	40·1	45·0	+2·6	9·8	54·5	23rd	34·1	13th
Feb. ...	48·5	39·6	44·1	+0·9	8·9	54·7	4th	30·3	14th
March .	51·5	41·0	46·3	+2·1	10·5	58·5	30th	32·1	18th
April . .	53·3	43·7	48·5	+0·3	9·6	64·3	23rd	37·0	1st
May ...	61·2	48·4	54·8	+1·5	12·8	77·4	27th	40·3	2nd
June ...	64·6	51·3	58·0	−0·5	13·3	79·0	29th	46·5	27th
July ...	67·8	55·2	61·5	−0·3	12·6	75·2	23rd	51·2	6th
Aug. ...	69·7	56·8	63·3	+1·7	12·9	78·3	14th	49·1	9th
Sept. . .	64·9	54·8	59·9	+1·6	10·1	71·4	11th	48·7	20th
Oct. ...	61·0	51·3	56·2	+3·9	9·7	65·9	9th	40·8	24th
Nov. ...	56·3	44·9	50·6	+3·3	11·4	60·0	10th	34·3	25th
Dec. ...	49·0	41·5	45·3	+1·3	7·5	58·4	1st	30·3	31st
Year	58·1	47·4	52·8	+1·5	10·7	79·0	June 29th	30·3	Feb. 14th

DURATION OF BRIGHT SUNSHINE

In hours and tenths of an hour,

As recorded by the Campbell-Stokes' Standard Instrument.

1913.	Total Bright Sunshine.	Percentage Actual of Possible.	Difference from Average.	Greatest Amount in one day.	Date.	Percentage Actual of Possible.	Sunless Days.
	Hours.	%	Hours.	Hours.		%	
January ...	44·8	17	− 22·1	5·7	12th	70	10
February ...	79·4	29	− 13·0	8·2	14th	84	8
March	109·2	30	− 30·5	9·8	8th	88	4
April	112·4	27	− 72·1	12·3	23rd	87	3
May	218·4	46	− 11·5	13·7	17th	89	1
June.....	212·9	44	− 4·7	13·8	28th	86	0
July.....	197·3	40	− 51·2	13·8	25th	93	1
August.....	178·5	40	− 41·1	12·5	5th	84	3
September..	110·9	30	− 58·3	11·3	7th	87	6
October ...	113·3	35	− 0·5	8·5	9th	77	4
November..	94·1	36	+ 11·5	7·7	8th	66	4
December..	54·9	23	+ 0·9	6·6	24th	87	6
Year...	1526·1	34·5	−292·6	13·8	June 28th &July25th	86 93	50

RAINFALL

In inches and hundredths.

1913.		Total Amount.	Difference from Average.	Wet Days.	*Mean* Wet Day Rainfall.	Greatest fall in 24 hours.	Date
January ...	*C. G.	7·22	+4·04	27	0·27	1·00	4th
,,	†P. P.	6·97		27	0·26	0·96	4th
February ...	C. G.	1·44	−1·27	8	0·18	0·55	7th
,,	P. P.	1·46		8	0·18	0·56	7th
March	C. G.	3·74	+1·09	19	0·20	0·61	29th
,,	P. P.	3·66		19	0·19	0·57	29th
April	C. G.	4·05	+1·81	19	0·21	1·39	26th
,,	P. P.	4·01		19	0·21	1·37	26th
May.....	C. G.	2·59	+0·68	15	0·17	0·69	11th
,,	P. P.	2·40		15	0·16	0·63	11th
June.....	C. G.	0·51	−1·67	12	0·04	0·13	19th
,,	P. P.	0·50		12	0·04	0·12	19th
July	C. G.	0·30	−1·95	6	0·05	0·16	7th
,,	P. P.	0·28		6	0·05	0·16	7th
August.....	C. G.	1·53	−1·16	8	0·19	0·80	30th
,,	P. P.	1·46		8	0·18	0·76	30th
September	C. G.	2·50	+0·33	13	0·19	0·77	5th
,,	P. P.	2·47		13	0·19	0·75	5th
October ...	C. G.	3·68	−0·44	20	0·18	0·52	30th
,,	P. P.	3·58		20	0·18	0·52	30th
November	C. G.	3·54	−0·01	20	0·18	0·80	11th
,,	P. P.	3·43		20	0·17	0·73	11th
December	C. G.	2·07	−2·00	9	0·23	0·96	23rd
,,	P. P.	2·03		9	0·23	0·91	23rd
Year.....	C.G.	33·17	−0·55	176	0·19	1·39	Apl. 26th
,, ...	P. P.	32·25		176	0·18	1·37	Apl. 26th

* Cary Green. † Princess Pier.

HUMIDITY, CLOUD, OZONE, AND WIND.

1913.	Humidity.			Cloud	Ozone. Percentage of possible.			Wind.
	Dry Bulb *mean.*	Wet Bulb *mean.*	Relative Humidity.	Cloud *mean* 1 to 10.	*Mean* Daily Amount.	Greatest Daily Amount	Least Daily Amount.	Prevailing Quarters.
	°	°	%		%	%	%	
January	45·0	43·5	88	7·0	59	80	20	W. & S.W.
February	42·9	40·7	83	6·5	53	90	10	N.E., N.W. & E.
March ...	46·9	44·3	81	6·0	69	90	10	W.
April ...	49·1	46·6	82	7·5	61	90	20	W.
May	54·7	51·7	80	5·5	57	90	10	W.
June.....	59·2	54·8	74	6·5	55	70	30	W.
July	62·1	57·0	71	7·0	54	70	10	N.W.
August...	63·3	58·6	73	5·5	46	70	10	N.E.
Sept. ...	59·8	57·1	83	6·5	47	80	10	N.E.
October	56·1	54·0	86	5·5	54	70	20	Variable
Nov. ...	49·5	47·5	86	4·0	58	90	10	W.
Dec.	44·6	42·5	84	6·5	54	90	10	W.
Year...	52·8	49·9	81	6·2	56	90	10	W., N.W. & N.E.

BAROMETRIC PRESSURE

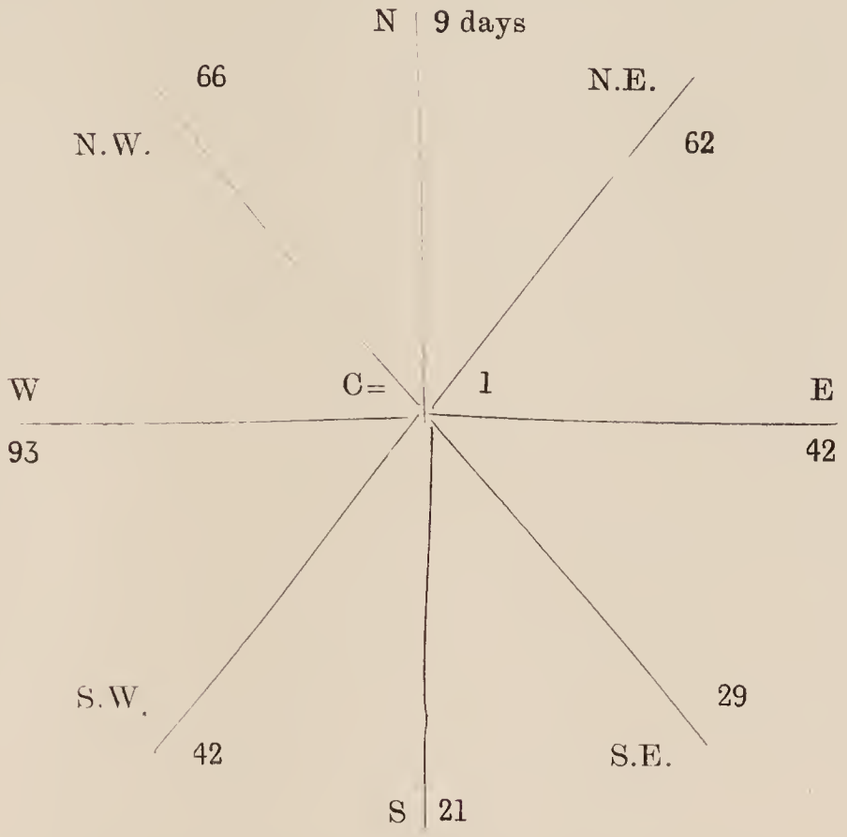
In inches and thousandths.

Reduced to 32° F. and Sea Level.

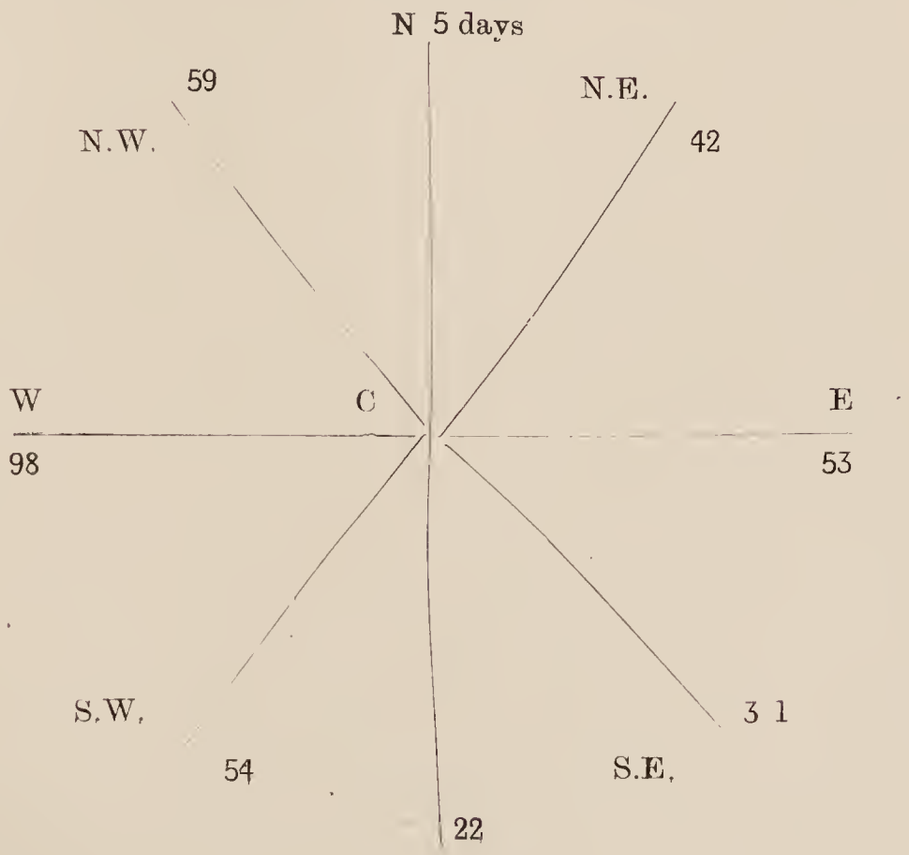
1913.	*Mean* of Month.	Difference from Average.	Highest Reading.	Lowest Reading.	Extreme Range of Pressure.
January	29·753	−0·321	30·288	29·118	1·170
February	30·160	+0·169	30·660	29·678	0·982
March	29·915	−0·027	30·590	29·097	1·493
April	29·868	−0·041	30·190	29·315	0·875
May	29·914	−0·059	30·351	29·353	0·998
June.....	30·127	+0·123	30·444	29·778	0·666
July	30·083	+0·080	30·369	29·800	0·569
August.....	30·085	+0·117	30·272	29·766	0·506
September	29·958	−0·086	30·354	29·370	0·984
October	29·835	−0·110	30·406	29·093	1·313
November	29·963	+0·031	30·522	29·302	1·220
December	30·174	+0·231	30·669	29·516	1·153
Year	29·986	+0·009	30·669	29·093	1·576

WINDROSE.

Direction of wind observations taken at 9 a.m., local time 9.14, G.M.T.



Direction of wind observations taken at about 5 p.m.



METEOROLOGICAL ABSTRACT, 1913.

Highest Shade Temperature	79·0
Lowest Shade Temperature	30·3
Mean Maximum Temperature	58·1
Mean Minimum Temperature	47·4
Mean Temperature	52·8
Mean Range of Temperature	10·7
Total Rainfall	33·17
Hours of Bright Sunshine...	1526
Sunny Days	315
Mean Humidity, percentage of possible ...	81%
Mean Ozone	56%